1998

Marginal Employment in the United States: 1971-1993.

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MARGINAL EMPLOYMENT IN THE UNITED STATES: 1971-1993

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Sociology

by
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May 1998

Acknowledgments

Many people have contributed to my dissertation research and the work presented in this document. First, I would like to thank my chair and the members of my dissertation advisory committee: Dr. Katharine M. Donato, Dr. Charles M. Tolbert, Dr. Roger Wojtkiewicz, and Dr. John J. Beggs. Through informal conversations and classroom hours, each person has made substantial contributions to my dissertation, in particular, and more generally, to my overall graduate training. I am particularly indebted to Jack Beggs for taking time from his summer research to conduct an informal methods seminar devoted to the analyses presented in Chapter 5 of this dissertation. Katharine Donato, my dissertation chair, deserves special thanks for her astute mentoring and great contribution to my professional development. Through hours of meetings, informal conversations, and revisions, she has encouraged me to search for the overall meaning in my work, and instilled in me the drive to push my limits and not settle for anything less than my best effort.

My work at Louisiana State University was made possible by the unwavering support of family, friends, and colleagues. Conversations with faculty and other graduate students, notably Drs. Joan Manley and Mary Gautier, and fellow graduate students Rebel Reavis and Melissa Stainback, provided theoretical insight, alternative arguments, and social support. Also, special thanks goes to Brett Hebert for his technical expertise and graphic skill.

The support of my family has been tremendous and always my greatest source of strength and determination. I thank them for being patient with me as I completed not two, but seven, more years of schooling, and their continual endorsement of my career and the choices I have made.

Most importantly, I have to thank my husband Scott, who has been with me since the beginning of this journey, and our son Mackenzie, who joined us for the dissertation. Scott's belief in me, and the sacrifices that he has made for my career, are endless. I simply could not have done this without him. I also thank Mac for his uncanny toddler gift of putting my work into proper perspective. Finally, through their unconditional love and acceptance, I am constantly reminded that this is but one significant stop on our much longer trip together. Godspeed.

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Abstract

In this dissertation, I examine trends in production and the concomitant demographic transformation of the labor force, in the context a series of economic cycles since 1969. Using these three forces as a backdrop, I first consider changes in employment hardship and the forces contributing to underemployment during periods following economic recessions. Then, I examine differences between men and women for employment outcomes. Next, to explain hardship during these periods, I include important demographic and geographic factors related to underemployment. Finally, I examine the impact of labor market context on individual outcomes. Based on the transformation of work, I explain changes in employment inequality and how these changes affect men and women.

Using data from four time periods following recessions since 1971, I compute a series of logistic regression analyses to estimate the effect of time period of employment hardship. Then I examine period effects again, while controlling for theoretically meaningful correlates of marginal employment. Next, I compare chances of being in a low quality job versus being unemployed. Finally, I estimate multilevel models, controlling for labor market qualities related to employment.

Findings from these models suggest that marginal employment has become institutionalized for men and women by the early 1990s. In addition, although the effect of period was different by sex in circa 1978 and 1988, by the final time period, men and women were comparable in the effect of period on marginal employment. Results from multi-level models show that although both sexes receive similar returns for individual

level attributes, women are worse off in labor markets with high levels of occupational sex-segregation.

Chapter 1

Introduction

Although the 1960s was a time of civil and political unrest in the United States, it was also a period of relative abundance and economic optimism. Unfortunately, this period of expansion stalled by the early 1970s (Farley 1996, Levy 1995, Thurow 1996). Since then, inequality between the rich and the poor has grown, and up until very recently, Americans were pessimistic about employment prospects (Reich 1997). On the whole, one group that has experienced better employment outcomes since 1970 is women (Farley 1996, Thurow 1996). Women are now on parity with men in terms of education, and they have also made significant progress in reducing the wage gap, in part because their real wages increased (as men's declined) since the early 1970s (Goldin 1990, Bianchi 1995, Bernhardt, Morris, and Handcock 1995, Morris, Bernhardt, and Handcock 1994).

Among women, however, inequality has increased since 1970. White women have made significant progress in terms of wages, and the result is a bifurcation in the income distribution that is beginning to resemble that of white men. On the other hand, the moderate financial gains black women experienced during the 1970s have stalled, and recent trends show an increase in low-wage earners within this group (Bernhardt, Morris, and Handcock 1995, Morris, Bernhardt, and Handcock 1994). Hispanic women also experienced labor market disadvantage throughout the 1970-1990 period.

However, by 1990, Puerto Rican women received wages comparable to whites, but only at high levels of education (Tienda, Donato and Cordero-Guzmán 1992).

Industrial restructuring clearly contributed to recent shifts in U.S. employment and inequality. Studies suggest that contemporary industrial shifts have provided less opportunity than in the past, and that technological changes across industries led to bifurcated employment outcomes (Morris, Bernhardt and Handcock 1994, Farley 1996, Harrison and Bluestone 1988, Colclough and Tolbert 1992, Sassen 1994). Many have described the consequences of these changes as deskilling, outsourcing, and downsizing (Harrison and Bluestone 1988, Reich 1997).

At the same time, several demographic trends affected the size and skills of the labor force. Notably, both single and married women rapidly increased their share of the labor market since 1970 (Goldin 1990, Bianchi 1995). Delay in first marriage certainly influenced this trend, but married women also increased their participation during this period. Furthermore, with rising levels of schooling, the labor force has become increasingly female, married, and well educated since 1970 (Farley 1996, Mare 1995, Bianchi 1995).

Complicating these two sets of changes was a series of economic swings in the U.S. economy. From 1950 to the late 1960s, the U.S. economy expanded and unemployment remained low, however, since 1970, our country experienced several downturns. Two measures of prosperity, Gross Domestic Product (GDP) and unemployment, illustrate the rapid series of economic cycles. Figure 1.1 illustrates recent economic downturns by describing changes in GDP and unemployment. Shaded

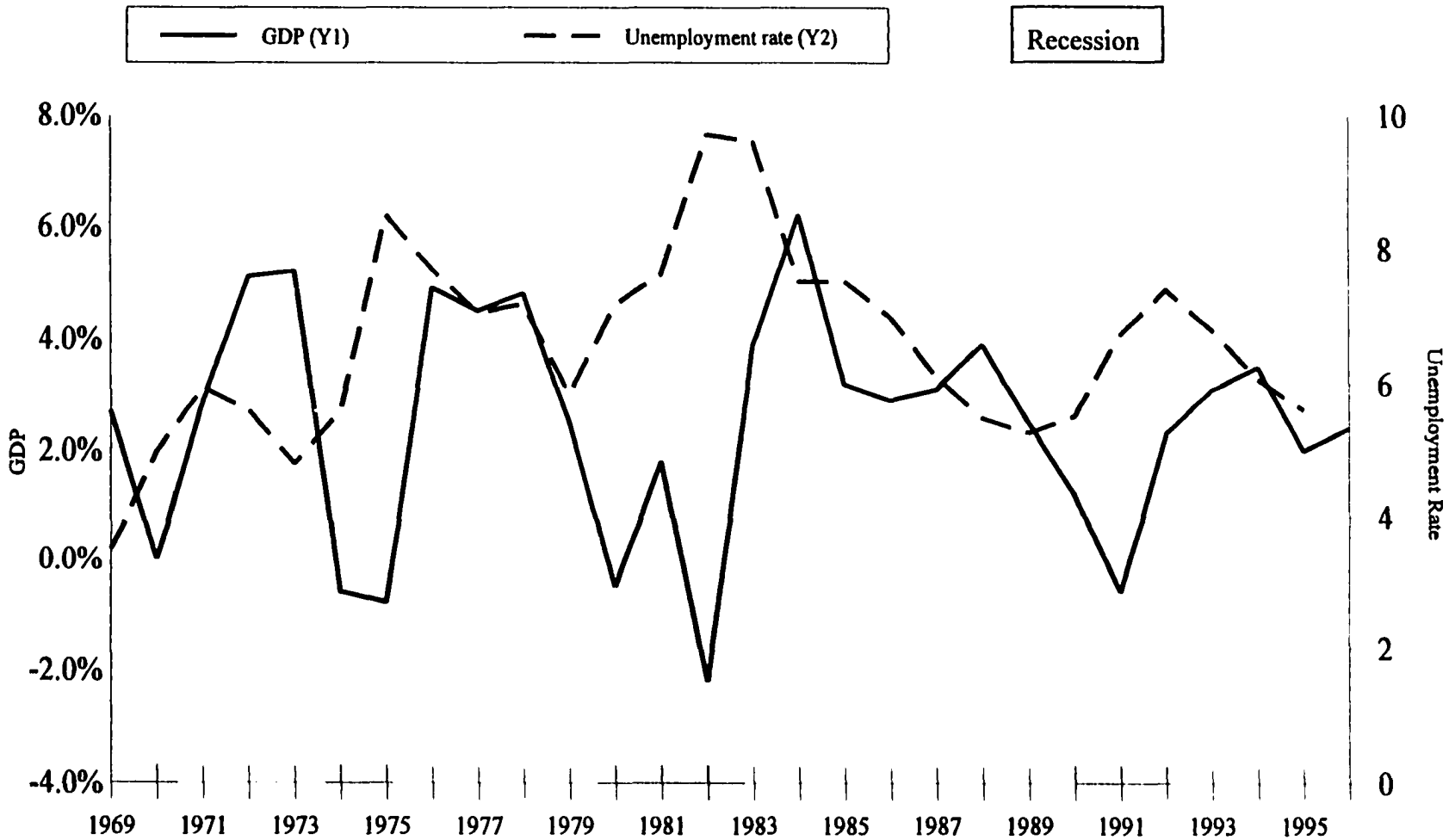

Figure 1.1 Yearly change in Gross Domestic Product (GDP) and Annual Unemployment Rates, 1969-1995

areas refer to recessionary periods.[1] I begin at the end of the 1960s, a period that witnessed a slight downturn as the United States experienced a drop in economic growth and unemployment rose to almost 6 percent.

The oil crisis in the early 1970s was the first sign that rising standards of living would not continue. As Figure 1.1 shows, unemployment skyrocketed, rising from 3.5 in 1969 to a high of over 8.5 by 1975. GDP, on the other hand, dropped over 4 percent, to negative growth during the same period. Stagnation in national production spurred a rise in income inequality during the period (Levy 1988, 1995, Hirschman 1988, Karoly 1993). However, immediately following this period, with renewed attention to domestic output of primary materials, such as oil and agriculture, the growth rate in GDP rose to over 4 percent by 1976.

The second major recession struck during the latter half of 1979 and lasted until mid-1982. Figure 1.1 shows that at the peak of this recession, over 8 percent of the labor force was unemployed, and growth in GDP dropped to its lowest level recorded since 1969. Sharp increases in inequality occurred, as the rich increased their share of wealth at the expense of the middle and low-income population (Danzigger and Gottschalk 1993, Reich 1997). After several years of decline, growth in GDP turned upwards by 1983 and remained positive until 1990. Likewise, unemployment started to fall and by 1989 it had dropped to 5.3 (Bureau of Labor Statistics 1995).

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[1] Although similar to one published elsewhere (Farley 1996:81), Figure 1 here describes changes over a longer period of time, from 1969 to 1995.

The final downturn began in late 1990 and continued through 1991. Research suggests that although prior recessions were felt mainly by workers with less education and less experience, this one extended hardship to a wide range of employees with stable work histories (Levy 1995). Some middle managers lost their jobs as employers restructured; others opted for early retirement (Reich 1997).The recovery following this downturn was unique in two ways. First, the economy grew at a slower pace than following previous recessions. Whereas the growth in GDP rose over 4 percent at the onset of earlier recoveries, in this case it increased a modest 2 percent. Second, the unemployment rate continued to increase for a full year after the upturn in GDP in 1991 (rather than starting to decline immediately with the growth in GDP, see Figure 1).

The implications of such trends are important. Cyclical changes in employment are expected as a result of downturns, but hardship remaining after recessions may suggest structural changes in employment. In fact, reports that many workers faced a limited set of employment opportunities, including low-wage and part-time work, were quite common by the mid-1980s (Reich 1997).

In this study, I consider employment hardship during the years following each recessionary period. Figure 1.2 shows these periods in dark shading, immediately after lighter-shaded recessions. I argue that recurrent, cyclical episodes of economic decline raised the likelihood of poor work prospects by the 1990s. This is largely because changes in labor markets bifurcated employment opportunities and the hardships workers faced during recessions became increasingly more difficult to remedy during

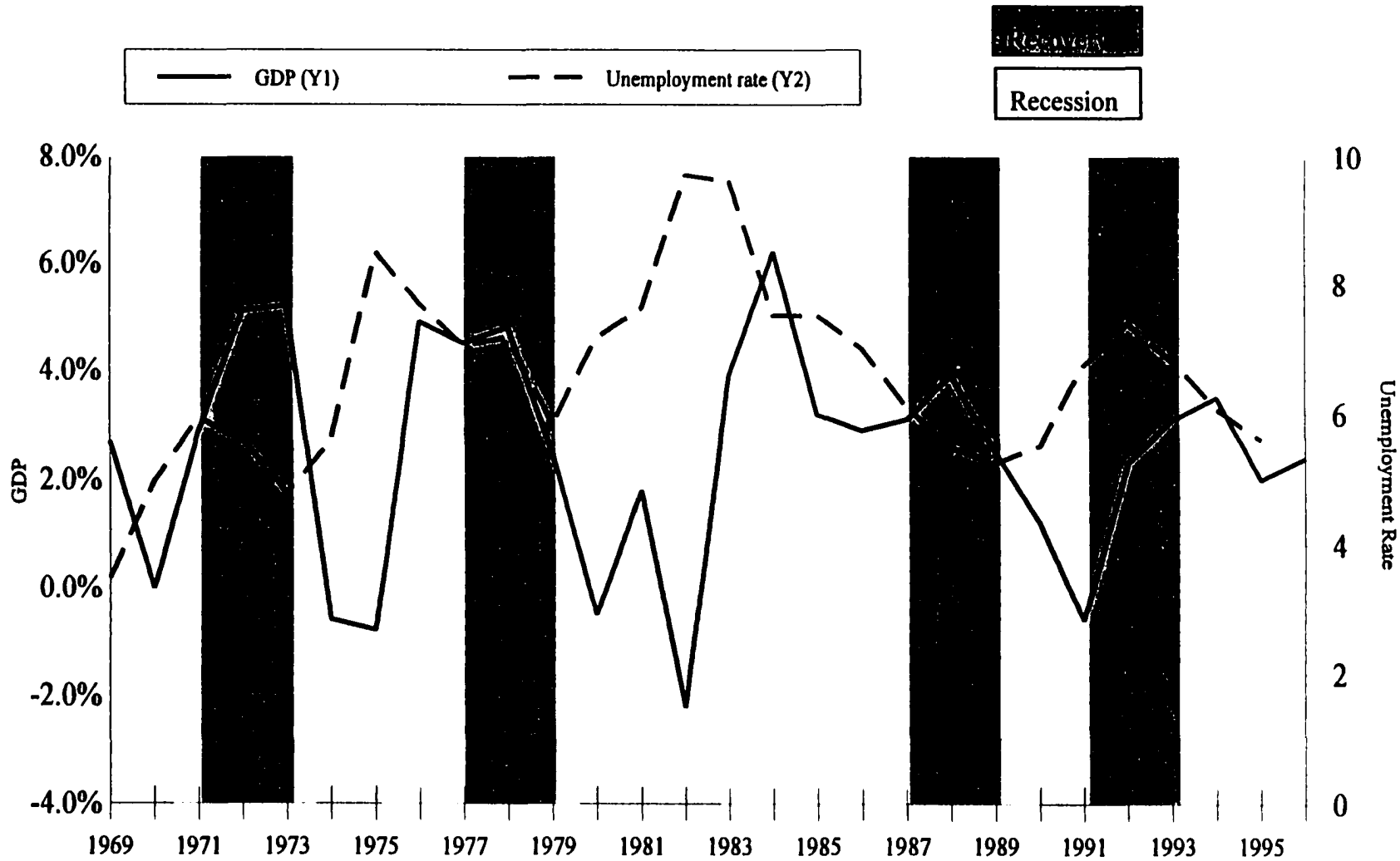

Figure 1.2 Yearly change in Gross Domestic Product (GDP) and Annual Unemployment Rates, with an emphasis on Period of Recession and Recovery,1969-1995

periods of recovery. The combination of economic cycles and labor market changes resulted in the increase of marginal employment by the 1990s.

The first post-recessionary period, 1971-73, is the baseline for my study. During these years the economy was still growing, despite the highest rate of unemployment (about five percent), since the early 1960s. The second recovery period is 1977-79, when the unemployment rate fell to less than 6 percent and growth in GDP hovered between four and three percent.

Following the early 1980s recession, growth in GDP rose from below zero to six percent between 1982 and 1983, and the unemployment rate declined from ten to seven percent. However, by the mid-1980s, the boom slowed (see Figure 1.2).Therefore, the third recovery period in my analysis is 1987-89. It covers the lowest point of unemployment since the recession of the early 1980s and a time of average growth in GDP.

The final post-recessionary period began in 1991, with the upturn in domestic product growth. As described earlier, unemployment declined at a slower rate following this recession (versus earlier ones), and the recovery was slower and less dramatic than prior ones. Consequently, employment hardship in the 1991-93 post-recessionary period may be considerably different than earlier periods.

General Research Strategy

In this dissertation, I describe changing patterns in U.S. production and demography. Using these economic and social transformations as a backdrop, I consider

changes in employment hardship, and the forces contributing to it, during periods of recovery. To explain hardship during these periods, I control for important demographic and geographic factors, as well as contextual factors within the labor market. My focus is threefold: first, I examine employment hardship increased since 1971; second, I determine how demographic and geographic attributes affect poor work outcomes, and finally, I explain how these outcomes, and the factors that influence marginal employment, differ for men and women.

Organization of Dissertation

In the next chapter, I review the literature on employment inequality and demographic trends. I begin by describing labor force patterns based on traditional measures of employment, and then expand the discussion to include newer and more detailed ways of capturing employment hardship, such as being underemployed, receiving low wages, and working part time. Next I review important shifts in the population structure that are particularly relevant for employment. Finally, I conclude with a conceptual model of these relationships, and my general expectations.

Chapter 3 concerns data and methods. First I describe the CPS data, its limitations, and how I use it to measure underemployment. Then I explain what types of analyses I conduct to answer questions regarding employment hardship. I conclude this chapter with a description of the entire study population, the underemployed population, and each form of underemployment.

In Chapters 4 and 5, I document the trends and patterns of underemployment in periods of economic recovery for men and women. I estimate the chance that men and women were underemployed or experienced other poor work outcomes during these periods, and then control for related demographic and geographic attributes. Then, I link individuals to their labor markets in Chapter 5. In multilevel analyses, I examine which area conditions reduce, or exacerbate, the odds of men and women experiencing hardship.

In the final chapter, I bring together these findings and discuss their implications for employment hardship. Specifically, I link patterns for men and women to the broader picture of gender inequality and describe policy-related concerns arising from my findings. Finally, I conclude with the next steps in this line of research.

Chapter 2

Recent Trends in Attachment and a Conceptual Framework for Studying Marginal Employment

In this chapter, I first describe trends in traditional forms of labor force attachment, emphasizing transformations over the past 25 years and the failure of standard measures to capture changes in attachment. Then I introduce measures of underemployment, developed by Clogg and his colleagues, and review findings about this form of employment hardship and its components. In a subsequent section, I describe industrial and demographic changes that have implications for employment inequality since 1970. Finally, drawing from the literature reviewed in this chapter, I conclude by stating my expectations about employment hardship, in light of shifts in employment and demographics.

Trends in Employment Inequality

Labor force attachment has changed over the last 25 years. In the past, most social scientists defined labor force attachment as either employment or unemployment. More recent studies have unveiled nontraditional forms of attachment, such as nonparticipation and underemployment and have incorporated new measures of employment outcomes. In the section that follows, I review how traditional and nontraditional forms of labor force attachment have changed since 1970 and how these trends vary by sex, race, and ethnicity.

Trends in traditional labor force attachment

By the end of the 1960s, the United States had experienced its lowest level of unemployment in roughly 15 years. This decade witnessed the end of steady economic growth and impressive increases in living standards. Thereafter, the nation experienced dramatic economic declines, easily observed in shifts in unemployment (Clogg and Shockey 1985). In just 10 years, from 1969 to 1979, the unemployment rate more than doubled and then climbed again during the economic recession of 1982-1983 (Hirschman 1988). Although the economy rebounded after each downturn, unemployment never returned to the low levels set in the 1950s.[1]

Prior studies have documented that aggregate trends in employment mask variation by race and ethnicity (Hirschman 1988, Clogg and Sullivan 1983, Tienda, Donato, and Cordero-Guzmán 1992, Smith and Tienda 1988, Farley 1996, Wetzel 1995). For example, during that past 25 years, the gap in employment between blacks and whites widened. Traditionally, blacks were unemployed at rates roughly double those for whites, but by 1985, the unemployment rate for blacks was more than twice that for whites (15.3 vs 6.1, respectively; Hirschman 1988). Furthermore, even though black unemployment rates declined considerably as the U.S. economy rebounded in the 1990s, they remain about twice those of whites. By 1995, unemployment levels for blacks and whites were 10.4 and 5.0, respectively (Bureau of Labor Statistics 1995).

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[1] Only very recently have we begun to see levels of employment comparable to the mid-1970s; the unemployment rate in 1995 was 5% (Bureau of Labor Statistics 1995).

In general, women experienced employment cycles similar to men and were employed at comparable levels. During the 1970s, women's unemployment rate increased by 2 points, rising to 6.5 by 1980. By 1990, however, this rate had dropped to 5.0 (Bureau of Labor Statistics 1995). Currently, men and women are employed at very similar rates, 4.2 and 4.5, respectively (Bureau of Labor Statistics 1997).

Once again, however, employment hardship for women varies by race and ethnic groups. Findings reveal that for those employed in the civilian labor force, unemployment was higher for women of color than for comparable whites, and it also varied extensively by ethnicity (Smith and Tienda 1988, Tienda, Donato, and Cordero-Guzmán 1992). For example, in 1980, Mexicans, blacks and Puerto Ricans experienced significantly higher rates of unemployment than whites (10, 12, and 13 vs 5.6 percent, respectively; Smith and Tienda 1988,). Minority women experienced little relief with the passage of time. By 1993, Mexicans, Puerto Ricans, and blacks were unemployed at double digit figures, whereas white womens' unemployment was 6.0 percent (U.S. Bureau of the Census 1995).

Trends in nontraditional forms of labor force attachment

From this review, I conclude that white men and women are unemployed at roughly similar rates, and that blacks are twice as likely as whites to be unemployed. In the next section, I continue with a review of patterns and trends in poor work outcomes related to underemployment. Like Clogg and his colleagues, I argue that the world of work has become increasingly complicated so that labor force attachment is no longer simply a matter of being employed or being unemployed (Harrison and Bluestone 1988,

Bradbury 1986, Colclough and Tolbert 1992, Lichter, Landry and Clogg 1991, Findeis 1995). Rather, many people may be precariously attached to the labor force through seasonal work and marginal jobs. Trends in these types of employment hardship are also related to inequality.

Interestingly, the concept of underemployment dates back to the Great Depression (Sullivan 1978, Clogg and Sullivan, 1983, Hauser 1974). At that time, it was agreed that underemployment included, at minimum, persons who involuntary work part time, work for near-poverty wages, experience education and occupation mismatch, or discouragement. Since then, researchers have identified and constructed measures for a series of qualities that constitute underemployment (Sullivan 1978, Hauser 1974, 1977, Lichter, Landry, and Clogg 1991). First, the idea of underemployment was expanded to include unemployment (Clogg 1979, Sullivan 1978, Clogg and Sullivan 1983, Lichter 1988, Lichter, Landry, and Clogg 1991, Jensen 1995, Findies 1995), and subsequently detailed forms of unemployment, such as part-time unemployed, and part-time work (Clogg, Eliason and Wahl 1990).

Employing an extension of the labor utilization framework (LUF) developed by Sullivan (1978) and Hauser (1974), more recent studies agree that underemployment consists of at least four states of labor attachment, including discouragement (when workers cease to look for work because they believe none is available), unemployment, part-time, and low wage work (Lichter 1988, Findeis 1995, Jensen, Findeis and Hsu 1996). In the complex arena where jobs and skills are exchanged, these distinctions have become an increasingly useful way of characterizing labor force attachment.

In the following paragraphs, I describe these four components of the LUF and their trends since 1970. Discouraged workers are those who are not employed because they see no hope of finding a job. Unemployed workers are without a job but actively looking for work. Respondents who are working part time but prefer to be employed full time are working for few hours, whereas workers with earnings slightly above the poverty level are working for low wages. Finally, workers with more education than their current job requires are mismatched for their positions. Taken together, these states capture employment situations that researchers agree have negative consequences for personal and social welfare (Clogg and Sullivan 1983).

Analyses conducted by Clogg and his colleagues (Clogg and Sullivan 1983) suggest that underemployment has increased since 1970. The share of all persons experiencing underemployment increased 10 percent from 1969 to 1980, from 23 to 33, and varied little by sex (Clogg and Sullivan 1983). This rise in poor work outcomes for men was largely attributable to increases in workers who were educationally mismatched for their occupations, which doubled during this time period, and unemployment (which increased from 3.4 to 6.5 percent between 1969 and 1980). Among women, the increase was a consequence of their greater tendency to be discouraged or earn low wages.

Not surprisingly, blacks also experienced more underemployment than nonblacks. In 1969, underemployment for blacks and nonblacks was 35 and 22 percent respectively. Over the next ten years, hardship rose for both groups, to over 40 percent for blacks and over 30 percent for nonblacks. Increases in black underemployment were

attributed to rising numbers of discouraged, unemployed, and mismatched workers. This overall level of hardship was offset somewhat by a reduction in low wage employment during the 1970s. Despite this improvement, however, by 1980 blacks were still twice as likely to be unemployed as nonblacks, and three times as likely to be discouraged workers.

To sum, it is evident that labor force attachment has changed significantly over the past 25 years. Although hardship rates varied little by sex, during the 1970s and 1980s, unemployment increased for both men and women, and rates for blacks were at least twice that of whites. Other forms of marginal employment increased as well. Men were more likely to be unemployed or experience occupational mismatch, and the percentage of women earning low wages rose during the 1970s. Hardship also increased for minorities. Blacks were consistently more likely to suffer poor work outcomes. Therefore, although traditional measures of attachment describe the population actively working or seeking employment, they alone no longer capture the diversity in labor market behavior since 1970.

Explanations for Employment Inequality Since 1970

Nontraditional distinctions in attachment were developed in response to complex changes occurring in the U.S. work environment. In this section, I describe these changes in economic production and their implications for employment hardship. Then I review important demographic trends that have influenced the composition of the

workforce and have consequences for understanding underemployment. These two sets of changes develop the context for my analysis of employment inequality.

Changes in Economic Production

A primary source of labor market change has originated in the transformation of economic production. For example, at the turn of the century, the principle output was primary or extracted goods, including agricultural crops and coal. Gradually, it has shifted to goods manufactured on factory assembly lines, and then to production of services. Now common outputs include restaurants and hospitality services, and information and knowledge processes, such as finance and business services. Therefore, economic production was redirected, from production of goods to production of services (Singelmann 1975).

Studies linking increasing inequality to the transformation of industrial sectors have suggested that movement from manufacturing to services has eroded good jobs. As the service sector became more specialized, it created divisions resulting in multi-tiered wage, skill, and labor structures. One consequence is a greater emphasis on skill and technology, now apparent in most industrial settings, where education and experience are rewarded with better pay irrespective of sector. This general movement toward more skilled workers as a consequence of industrial restructuring has implications for increased inequality in the United States (Murphy and Welch 1993).

Implications of Economic Changes for Employment Hardship

As shifts in economic production have reorganized the U.S. industrial structure, they have also increased service sector employment. For example, employment in

services increased from 60 to 65 percent between 1973 and 1987, whereas in manufacturing it declined from 22 to 18 percent during that same time (Appelbaum and Albin 1992). Certain services, such as retail and producer services, were linked to greater concentrations of workers earning low wages and working part time. For example, a one percent increase in retail services increased part-time, year round underemployment by .88 percent (Nord, Phelps, and Sheets. 1988). Other services, such as personal services, raised the percent employed in low wage jobs.

These trends were particularly evident in urban areas and across census regions (Kasarda 1995, 1991). For example, since 1970, employment in manufacturing declined in some of the largest cities, such as New York, Philadelphia, and Baltimore. At the same time, the percent employed in white collar services increased dramatically. As a result, as the Northeast and Midwest census regions collectively lost 1.5 million manufacturing jobs, the South and West gained half a million such jobs.

Losses in well-paying manufacturing jobs exacerbated employment hardship faced by black men. Most severe was the situation of young who dropped out from high school (Bound and Holzer 1991). For this subgroup, shifts in manufacturing explained between 35 and 50 percent of employment declines, and one-third of the increase year round joblessness (Bluestone, Stevenson, and Tilly 1991). Their drop in employment was responsible for half of the decline young black men experienced in earnings.

Job characteristics in the expanding service sector also played a role in increasing inequality, leading to descriptions of " 'good jobs' and 'bad jobs' "

(Loveman and Tilly 1988:49, Farley 1996). The former paid well and offered benefits similar to the traditional manufacturing jobs. These positions were lucrative and helped fuel an increase in families with annual incomes over $50,000 between 1973 and 1984 (Bradbury 1986). Growth high skilled service sector jobs increased through the 1980s and continued into 1990 (Appelbaum and Albin 1992, Farley 1996).

Bad jobs were primarily low-skill and low-paying positions with few benefits. These occupations included cashier, janitor, bartender and server, nurses aides and orderlies, and retail salespersons (Harrison and Bluestone 1988). Growth in these jobs contributed to hardship faced by low income families. For example, the proliferation of low-skilled service jobs exacerbated inequality by increasing the share of families with annual incomes below $20,000 by over 4 percent from 1973 to 1984 (Bradbury 1986). An increase in jobs on either end of this dichotomy led to what many referred to as the shrinking middle class (Bradbury 1986, Harrison and Bluestone 1988). Evidence for this phenomena can be found in the bifurcation of job growth for men. Between 1980 and 1990, the number of men in jobs paying less than $10.00 increased as much as the number of men earning more than $30.00 hourly, while there was almost no change in share of men earning between $15 and $25.00 per hour (Farley 1996).

These shifts in the organization of employment also had implications for gender and race inequality (Noyelle 1987, Reskin and Roos 1990, Glenn and Tolbert 1987). Many have argued that changes in the supply of good and bad jobs led to the development of a multi-tiered labor market. In high tech sectors, for example, women and minorities were more often concentrated in the lower tier, while white men held

more skilled, lucrative positions in the upper tier (Colclough and Tolbert 1992, Glenn and Tolbert 1987). Evidence suggests that differences in race and sex accounted for 45 percent of earnings inequality in high technology services, while other service industries these made up less than 20 percent of earnings inequality (Colclough and Tolbert 1992).

To sum, the shift in output from goods to services accompanied a restricting of industries and had important implications for employment hardship. Increases in the polarization of work within the service sector resulted in the creation of part-time and low-paying positions. Declines in well-paying, low-skill jobs increased unemployment and eventually sent more workers into less lucrative positions. Both shifts resulted in more people facing poor work outcomes, thereby increasing underemployment.

Demographic trends and Inequality

Although studies do not agree on how much industrial restructuring has increased employment inequality compared to shifts in population structure, three demographic changes are directly related to employment hardship. First, average levels of educational attainment have increased (Mare 1995, Kasarda 1995, Farley 1996, Murphy and Welch 1993, Sassen 1994). Second, women have increased their participation in the labor force (Wetzel 1995, Farley 1996, Goldin 1990, Bianchi 1995). Third, marriage rates have declined and single headship has increased (Wetzel 1995, Bianchi 1995, Farley 1996). Below, I review evidence about these issues, and consider the implications of each for employment hardship since 1970.

Educational Attainment and Implications for Employment Inequality

The U.S. population has become more educated. Between 1970 and 1992, the percent of the population over age 25 completing high school increased from 55 to over 80 percent. During the same period, the proportion of the population with a college diploma doubled, rising from 11 to almost 22 percent (U.S. Dept of Commerce 1995).

Although the gender gap has closed with respect to high school completion, some differences still exist between men and women in terms of college graduation. Aggregate trends documented increases in the number of college graduates since 1970. At that time, 14 percent of men completed college and eight percent of women did so. By 1993, 25 percent of men and 19 percent of women received bachelors degrees. However, trends for cohorts were more promising. The difference in college graduation rates almost disappears, for women and men in the late baby boom cohort (Bianchi 1995).

Unlike the convergence in attainment between men and women, aggregate trends in education mask substantial variation by race and ethnicity. Whites, blacks, and Hispanics all increased educational attainment since 1970. At that time, over half of whites completed at least four years of high school, while slightly over 30 percent of blacks and Hispanics did so. By 1990, over 81 percent of whites, 70 percent of blacks, and 53 percent of Hispanics completed high school. Patterns are similar for college education. In 1970, only 11 percent of whites and four percent of blacks and Hispanics completed four years of college. By 1990, however, whites and Hispanics doubled their completion rates, whereas blacks tripled them (Mare 1995).

Shifts in educational attainment are important during a time when the skills required for many jobs have changed. Together, they have created conditions that exacerbate overall levels of inequality. For instance, although more education increased the likelihood of employment, all groups, except college graduates, experienced a drop in wages during this period (Mare 1995). Additionally, there is evidence that suggests high levels of education increased the earnings of the most wealthy population more than it increased earnings for those on the other end of the distribution (Nelson and Lorence 1985).

Irrespective of overall increases in education, in many cases the educational requirements of jobs surpassed the populations' attainment (Kasarda 1989, 1990, 1995). For example, in Detroit in 1990, only 11 percent of jobs required less than a high school diploma, but 27 percent of whites, 25 percent of blacks, and 47 percent of Hispanics in the city did not complete high school. On the other extreme, 26 percent of jobs in Detroit required a college diploma, but only 13 percent of the white workforce, eight percent of the black, and six percent of the Hispanic workforce attained this level of education (Kasarda 1989, 1990, 1995).

Although the skill mismatch between workers and jobs clearly had implications for employment, in general, between 1980 and 1990, less educated workers were increasingly likely to be unemployed and completely withdraw from the labor force (Mare 1995). For example, 80 percent of men over age 35 without a high school diploma were employed in 1980, but by 1990, it dropped to 70 percent. Less educated

black men were more likely to be unemployed or to be out of the labor force than comparable white and Hispanic men (Hirschman 1988).

Education also increased participation and employment for women. Like trends for men, this effect also varied by race and by ethnicity. For example, in 1970, black and Puerto Rican women without a high school were less likely to participate in the labor force than comparable white women and other Hispanic women (Tienda, Donato, and Cordero-Guzmán 1992). However, when these minority women completed high school, their rates of participation exceeded that of white women. By 1985, black and Puerto Rican women with a high school diploma were more likely to participate in the labor force than whites (Tienda, Donato, and Cordero-Guzmán 1992).

Two studies suggest that underemployment varied by education. Both men and women with less than twelve years of education were more likely to be underemployed than workers with a high school diploma and some college (Findeis 1995, Lichter 1988). For example, about 34 percent of nonmetro women and 24 percent of nonmetro men with less than twelve years of education were underemployed in 1990, compared to eight and 15 percent of college educated men and women, respectively (Findeis 1995). Underemployment dropped to about 15 percent for women and nine percent for men if they had more than 16 years of education (Findeis 1995). In addition, the relationship between education and underemployment also increased over time. In 1970, 20 percent of black men and 12 percent of white men with less than twelve years of education were underemployed. By 1990, these percentages increased to over 45 and 30 for blacks and whites, respectively (Lichter 1988).

To sum, educational attainment has risen during the past 25 years. Women and men have increased their rates of high school and college graduation, and blacks have posted the largest educational gains. By most standards, education has become an important tool for enhancing labor force attachment. Although this experience has not been universal across race and ethnic groups since 1970, higher rates of attainment have been associated with declines in unemployment, nonparticipation, and underemployment.

Marriage, Female Labor Force Participation, and Implications for Marginal Employment

In this section, I continue my review of demographic changes by examining shifts in marriage and its implications for employment hardship. Then, I document the rise in women's labor force participation since 1970. Finally, I identify the consequences of this changes on employment hardship over the past 25 years.

In contrast to the 1950s, households now encompass a variety of family forms and living arrangements (McLanahan and Casper 1995). Greater diversity in familial forms results in part from complex changes related to marriage practices. The first is a decline in marriage rates since the mid-20th century. Rates of marriage for whites and Hispanics declined by about 10 percent between 1970 and 1990, from 73 and 72 percent, to 64 and 61 percent, respectively (US. Census Bureau 1991). Black marriage rates dropped by 20 percentage points to 43 percent in 1990 (U.S. Census Bureau 1991).

As marriage rates declined, single headship rose. In 1970, mother-only households composed 10 percent of all households, and father-only households just over

one percent. By 1987, female-headed families comprised over 16 percent of all households, while single-father households increased to almost four percent (U.S. Bureau of Census 1991). Divorce was certainly one source of single headship, but the share of unmarried women having children also contributed to rises in mother-only households (Farley 1996).

The increase in single-headship had implications for employment hardship. Single parents are more likely to experience poor work outcomes than spouses in married couple families (Mutchler 1985). However, single women were somewhat less likely to suffer hardship. Seventy percent of single women were adequately employed, while only 65 percent of similar men were adequately employed.

Closely related to the changing family structure is the rising numbers of women in the workplace. Although single women have participated in the labor force at higher rates than married women, by 1980, 61 percent of single women and half of all married women worked (Goldin 1990). This increase in participation continued through 1990 (McLanahan and Casper 1995). By that time, almost three-quarters of women between 25 and 54 were in the labor force (Farley 1996).

Throughout this period, difference in female labor force participation varied across race lines. Nonwhite married women participated more in the labor force in all three decades, 1970-1990, with 64 percent of nonwhite, and 55 percent of white, married women in the labor force by 1988 (Goldin 1990). Although all women have increased their participation, white single women had higher rates of participation than their married counterparts, and black single women participated at lower rates than

black married women. For example, by 1988 about 56 percent of nonwhite, and over 68 percent of white, single women were in the labor force (Goldin 1990).

To sum, rising numbers of working women and shifts in family structure contribute to inequality in the labor force and specifically employment hardship. Although single-headship and divorce rose for all women, whites continued to marry at higher rates than blacks. In general, women have increased their share of the labor force; however, this trend also varied by race.

Couched in the context of volatile economic cycles, the literature reviewed above documents two major transformations, industrial and demographic, spanning the past 25 years. Although these massive changes have certainly affected the context in which people work, to date we know little about how they contribute to the forces underlying patterns of employment hardship, such as earning low wages, working part-time, or being discouraged.

In this dissertation, I examine the effects of demographic changes on different types of employment hardship, such as unemployment, low-wage and part-time work, and worker discouragment, during post-recessionary periods since 1969. I begin by focusing on the underemployed population and consider which forms of hardship they are more likely to experience. By considering whether temporal effects remain after including relevant controls, I speculate as to what demographic and geographic factors are driving patterns in employment hardship. Finally, I attach labor market qualities to individuals and examine how contextual factors affect different types of marginal employment. In this way, this project adds to prior studies by emphasizing its changes

during periods of economic recovery, and addressing the driving forces behind employment hardship since 1970.

Employment Hardship in Periods of Economic Recovery

Figure 2.1 describes the major components that influence underemployment. Although the set of relationships outlined in here are not directly examined in a path analytic model, they do offer a useful way of thinking about employment hardship in the context of this dissertation. Grouping variables into general categories and then considering how these larger areas influence marginal employment provides a straightforward approach for addressing very complex issues.

The economic recessions that occurred during the past 25 years ended prosperity and middle class living for many people. In fact, the concentration of recessions during these years may have institutionalized poor work outcomes so that they are not easily reversed during times of recovery. Therefore, it is likely that economic cycles, combined with industrial and demographic changes, have increased in employment hardship since 1970.

General Hypotheses

This research will test a series of hypotheses. Most importantly, as a result of a series of economic cycles, coupled with changes in economic production and concomitant demographic trends, I expect to find increases in marginal employment during periods of recovery, relative to the early 1970s (see Figure 1.1, Chapter 1). Given the rapid expansion of service industries, I hypothesize that increases in employment

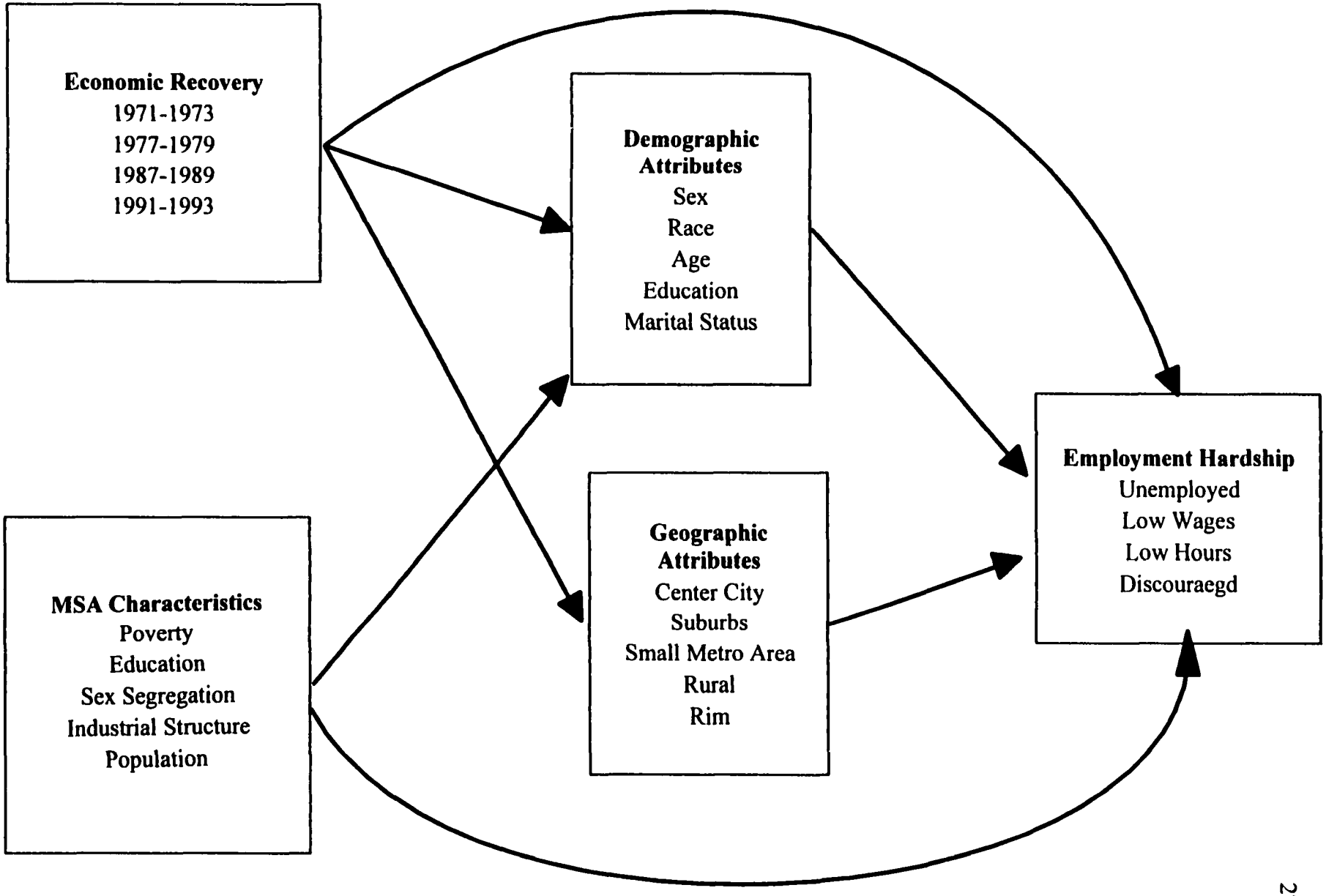

Figure 2.1 Conceptual Model of Employment Hardship

hardship are driven by increases in low-wage and low-hour work that many argue typify this sector (Harrison and Bluestone 1988, Loveman and Tilly 1988). If poor work outcomes have become institutionalized, I expect increases in underemployment and other poor work outcomes even during periods of economic recovery.

Prior research lays the foundation for expectations related to demographic controls. First, all things equal, I expect that women and blacks are more likely to be underemployed than men and whites. This may be a result of actual employment discrimination, or due to the types of jobs and/or preferences that women and minorities hold. As I said earlier, research suggests that in a multi-tiered labor structure, women and minorities are more likely to be employed in a lower tier. Such positions are more likely to be low paying and seasonal or part time (Reskin and Roos 1990, Glenn and Tolbert 1987, Colclough and Tolbert 1992). As such, I expect women and nonwhites will experience more employment hardship than men.

Education will reduce hardship in general, and for the underemployed population, the odds of being unemployed, earning low wages, or working part time. It is not clear from prior research whether higher levels of education will reduce worker discouragement. In fact, it may be the case that as people obtain more education, they grow increasingly cynical and pessimistic about job prospects.

Location will also affect underemployment. I expect that residents in Pacific and Southern coastal states (hereafter referred to as rim states) will report lower odds of being underemployed. Given the movement of industries and technology in search of cheaper land and labor, jobs should be more plentiful in this region. Consequently, I

expect that the expansion of jobs in rim states will reduce poor work outcomes in these localities. However, it may be the case that much of this job growth is in the service sector, which includes many part-time jobs and low-paying positions. Consequently, I expect that these two forms of marginal employment will be more likely in the rim region.

The thesis of industrial drift suggests that many land-intensive and lower-skilled jobs moved from the center cities as transportation and communication made the suburbs more attractive (Hawley 1986). Jobs remaining in the cities were increasingly high skill white collar positions, which were more amenable to vertical expansion (Kasarda 1990, 1989, 1995). Residents in the cities were often not qualified for the jobs located nearby, resulting in what many refer to as spatial mismatch (Kain 1968, Kasarda 1990, 1995, Wilson 1989, 19). Consequently, I expect that city dwellers are more likely to be underemployed that workers in outlying areas. In fact, as a result of the increase in industries and jobs in the suburbs, I expect less unemployment among these residents. However, since many of these jobs are in the service sector, I suspect that more suburbanites are earning low pay or working part time.

In pursuit of more profitable operating conditions, and in response to economic incentives, many firms relocated to smaller urban places and rural areas. Residents in these MSAs, known as edge cities because of their proximity to larger urban centers, and rural areas, will experience similar patterns in hardship. Underemployment should be lower in these locals.

To address these questions, I elaborate on the LUF (Hauser 1974, Sullivan 1978, Clogg 1979) using data from multiple Current Population Surveys. My plan for the analysis is as follows. First, after describing the data and methods for this project, I examine trends in different types of marginal employment in periods following recessions since 1970. This provides a general picture of what forms of employment hardship persist during economic recoveries. Then, I look specifically at the underemployed population. By doing so, I can observe changes in the different types of hardship and what types of hardship drive overall trends in underemployment since 1970. Finally, I incorporate theoretically relevant controls to the models in an effort to explain the patterns of employment patterns I report.

Chapter 3

Data and Methods

Data

The empirical analysis uses data from the Current Population Survey (CPS) Annual Demographic (March) File, and from the Current Population Survey Uniform March Files, 1964-1988.[1] These files contain monthly labor force data on individuals, and supplemental data on work experience, income, and migration (U.S. Department of Commerce 1990). The universe consists of the noninstitutional population of the United States living in housing units. The sample is a rotating 16-month survey, with half the respondents sampled in the first four months, not included in the next eight, and then sampled again in the final four months. Variables identify households sampled in each period, so users may select unique populations for adjacent years (U.S. Dept of Commerce 1990; Lichter, Landry and Clogg 1991).

At the baseline, two types of changes affect historical analyses using CPS files. These include changes in data collection or processing, and adjustments in weighting. For example, because of the implementation of a new computer processing system in 1988, only subsequent years are uniform in terms of variable location and matching

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[1] The uniform series of March Current Population Survey files was created under the direction of Robert D. Mare (University of Wisconsin) and Christopher Winship (Northwestern University) with financial support from the National Science Foundation through grant SOC-7912648.

procedures.[2] Major changes in the CPS were also implemented in 1994, incorporating new methods of data collection and a revised questionnaire (Cohany, Polivka, and Rothge 1994). At that time, the old pencil-and-paper method of data collection was dropped and collection was done using computer-aided telephone interviewing (CATI). Some questions were also changed to improve labor force data. For example, the definition of discourage workers was changed to make it more objective. In 1994, the CPS question redefines these workers as "persons how want a job, are available to take a job, and who had looked for work within the past year but not within the prior 4 weeks because they believed their search would be futile" (Cohany, Polivka, and Rothge 1994: 3-3).[3] Finally, because CPS weights change regularly (after each decennial Census, CPS weights are adjusted to reflect Census population estimates), comparability issues occur when using data over time. To account for weight changes, I compute an adjusted weight for each time period in the analyses that follow.[4]

The CPS is a large, representative sample of households in the United States. It provides employment data to the Bureau of Labor Statistics that serve as inputs for the monthly unemployment rate. It contains two key features for my analysis. The first is its

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[2] A rewrite file was issued to allow for income comparisons, using revised matching procedures, between 1988 and 1989.

[3] The Bureau of Labor Statistics suggests ways to deal with these changes and has issued a smaller version of the "old CPS" for a time period. Findings from comparisons, using measurement error analysis, are available in BLS technical reports (Miller 1994, Tiller 1994).

[4] Adjusted weights are equal to the original weight divided by its mean in each period.

large size, which makes it especially useful for a comprehensive analysis of employment hardship. The second advantage is that CPS data provide the information needed to capture employment hardship as it is defined in the Labor Utilization Framework (LUF) (Clogg and Sullivan 1983, Sullivan 1978, Clogg 1979, Lichter, Landry and Clogg 1991).Using the CPS, therefore, will both maintain the integrity of this line of research and allow for more detailed comparisons over periods of economic recovery.

Dependent Variables

As discussed in Chapter 2, traditional unemployment statistics ignore many marginally employed workers, such as low-wage earners. Because nontraditional forms of employment hardship, such as part-time and low-wage jobs, rose during the 1970s, I use the LUF to elaborate the extent to which these and other poor work outcomes persist into the 1990s. Recent studies describe employment hardship by including persons working in 'bad jobs' and those who withdraw from the labor force because they feel hopeless about the possibility of finding work. These studies include several poor work outcomes: being underemployed, unemployed, and discouraged, as well as part-time and low wage workers (Lichter 1988, Findeis 1995). [5]

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[5] Although the original labor utilization framework incorporated a measure of occupational mismatch, I do not include this in the present analysis because it uses arbitrary statistical criteria to measure overeducation (Hauser 1974, Sullivan 1978, Clogg 1979, but see Burris 1983, Smith 1986, Lichter 1988 for critique of mismatch). Other recent analyses do not include this controversial measure (Lichter 1988, Lichter, Landry and Clogg 1991, Findeis 1995).

Discouraged workers are persons who are no longer looking for work because they believe no work is available.[6] Unemployment is measured using the traditional indicator, and refers to individuals not currently working but actively looking for work, and those laid off and expecting either to be called back or otherwise employed within thirty days (U.S. Department of Commerce 1990). Involuntary part-time workers are those who work less than thirty-five hours per week for several reasons, including the inability to find full time employment, slack work, material shortages, repairs to plant equipment, and start or termination of a job during the week. Low-wage workers are those with labor market earnings below 1.25 times the official poverty threshold. This form of hardship captures the ability of jobs to provide adequate income.

Together with persons who are employed and in the labor force, these dimensions tap employment hardship and permit the analysis of movement between states of hardship, such as falling from a poorly paying position into joblessness (Lichter 1988, Lichter, Landry and Clogg 1991, Findeis 1995, Jensen, Findeis, and Hsu 1996). Therefore, in the analyses that follow, I measure each form of hardship separately, and then include the four together to assess underemployment in general. This allows me to examine how each dimension affects overall underemployment, and how the five types of hardship have varied since 1970.

As I discussed in Chapter 2, my main interest is in individual employment hardship after recessionary periods, and whether and how it increases over time. The

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[6] Hirschman (1988) characterizes discouraged workers as passively unemployed.

periods for this analysis (see Figure 1.2) are 1971-73, 1977-79, 1987-89, and 1991-93. These years, shortly after recessions, refer to periods of rising productivity and declining unemployment. Whenever possible, I started with the first year of an upswing, but because of comparability issues and problems matching serial numbers in the CPS data, this was not always possible. As a result, at least two years of recovery elapse before the 1977-79 and 1987-89 periods. For similar reasons, I limit recovery periods to three years.

Independent variables

Theoretically relevant controls include both demographic and geographic attributes. Traditional theories of human capital suggest that experience and education protect against employment hardship. Additionally, discrimination theories postulate that race is also a salient factor affecting employment outcomes. I therefore distinguish between non-Hispanic whites and blacks, based on self-reports of race and ethnicity. I also use age and age squared to control for both linear and nonlinear returns to experience. Education is measured with a series of five dummy variables, ranging from less than high school diploma to college schooling and I capture differences in marital status with three dummy variables, currently married, never married, and previously married.

Theories of industrial expansion and restructuring inform the operationalization of geographic measures. Studies suggest that industries and jobs have moved from interior, industrialized regions to access cheaper land and labor pools in states along the edge of the United States since 1970. Although services have expanded across all

regions, growth in manufacturing occurred primarily in the South and West (Kasarda 1995). In light of these changes, and because studies now suggest that using the frostbelt/sunbelt classification omits recent job growth, notably in "amenities, recreation, ...and knowledge-based industries" (Frey 1995:282), I approximate the geographic relocation of jobs since 1970 in a new way that distinguishes between states on the rim of this country and those in the interior. Table 3.1 presents the rim/interior classification used in this analysis. Rim states include those along the western and southern coasts. As a result of changes in coding in early years of the CPS, there are some inconsistencies between the first time period and later years.[7]

I also capture geographic location by distinguishing center city residence from suburban residence, and residence in smaller MSAs.[8] I expect that the disjunction between education and jobs has become particularly salient in center cities which once had a core of low skill manufacturing jobs, close to working residents (Kasarda 1989, 1995). Furthermore, the relocation of jobs to outlying areas should benefit suburban residents and those in small metro areas. Finally, because employment hardship is often worse in rural settings, I also control for rural residence (Findeis 1995).

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[7] All rim states are included in time periods after 1973. Before this year, many contiguous states had the same identifying code, and it was not possible to completely separate rim from non-rim states.

[8] MSA boundaries changed over time, especially with new definitions implemented in the early 1980s. As a result, there are many more MSAs in the later two time periods than in the early ones.

Table 3.1 Rim States, from 1971 to 1993

1971-1972	1973	1977-1993
North Carolina	North Carolina	North Carolina
South Carolina	South Carolina	South Carolina
Georgia	Georgia	Georgia
Florida	Florida	Florida
Alabama	Alabama	Alabama
Mississippi	Mississippi	Mississippi
Louisiana	Texas	Louisiana
Texas	California	Texas
California		New Mexico
		Arizona
		Oregon
		California
		Washington

Note: The states included in the rim region vary somewhat over the time series, due to changes in state codes.
Source: 1971-1993 Current Population Survey, Annual Demographic File

Methods

My analysis consists of several parts. First, I consider trends for each form of hardship separately for both the entire population and underemployed persons, and present distributions for five outcomes: underemployed, unemployed, low-wage, part-time, and discouraged workers. These descriptions show how employment hardship has changed since 1971. Then I describe individual attributes of the entire population and marginally employed persons during each time period. These detailed descriptions show how individual characteristics varied across the four periods of recovery. Next I examine the distribution of demographic and geographic attributes across the five employment outcomes for both the entire population and marginally employed persons. Finally, I examine the demographic and geographic characteristics of underemployed men and women within each type of employment hardship. Patterns glimpsed in these descriptive displays should hint at the multivariate findings in the following chapters.

I examine marginal employment net of a series of dummy variables that represent periods of economic recovery. This allows me to ascertain whether and to what extent each form of hardship increased during post-recessionary periods. I then estimate the same models, but do so only for the underemployed population. By examining period coefficients in these models (predicting the odds of being underemployed, unemployed, earning low-wages, working part-time, and being

discouraged), I document trends in forms of marginal employment over time.[9] The baseline model takes the following form:

$$L_o(UE)_i = \beta_0 + \beta_1 Y_{ij} + \varepsilon_i, \quad (1)$$

where

Ue_i equals 1, if the individual is in one of the employment states in question, and 0 if the individual is not; and Y_{ij} equals the recovery period, and $_j$ equals 0, 1, 2, and 3, representing 1971-73, 1977-79, 1987-89 and 1991-93, respectively; B_0 represents the intercept; and ε_i contains the error structure, which in these models is assumed to follow a binomial distribution. This model allows me to evaluate the overall effects of temporal changes in economic cycles. I expect that the probability of being marginally employed will increase over time. If so, this suggests that marginal work has been a more permanent feature of employment in post-recessionary periods, in contrast to less hardship during the initial recovery in the early 1970s.

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[9] By pooling time sections and using an indicator variable for time period, I estimate what effect period has on the likelihood of being poorly employed. While time series analysis is also appropriate for modeling change over time, typical time series analysis, such as the Box-Jenkins approach, assumes that the most recent event has a greater impact on the outcome than events in the past (McCleary and Hays 1980). I am not making this assumption, and in fact, the opposite may be true. That is, the early 1970s may have a stronger effect on employment hardship than the 1990s.

The next analysis includes demographic and geographic controls. Using correlates of employment hardship in my models, I examine whether temporal trends remain net of relevant controls. These equations take this general form:

$$L_o(UE)_i = \beta_0 + \beta_1 Y_{ij} + \beta \mathbf{X}_i + \varepsilon_i \quad (2)$$

where

UE_i equals 1 if the individual is in one of the employment states in question, and 0 if not; Y_{ij} equals recovery period, and $_j$ equals 0, 1, 2, and 3, representing 1971-73, 1977-79, 1987-89 and 1991-93, respectively; and X_i equals a vector of demographic and geographic controls defined earlier; and ε_i contains the error structure, which in these models is assumed to follow a binomial distribution.

A final analysis expands underemployment models by including the MSA level contextual variables with the individual level predictors in one nested model. To explore the contextual effects, I estimate a hierarchical generalized linear model (HGLM), using software developed by Bryk, Raudenbush, and Congdon (1993). This analysis is described in detail in Chapter 5.

These analyses allow me to describe changes in employment hardship during periods immediately following economic recessions. I ascertain how much hardship remains during these times of recovery, whether it has grown over time, what forces drive it, and how these findings differ for women and men. By including important demographic and geographic measures, I try to explain away, if you will, any variation

over time periods. Employment hardship that remains after controlling for correlates of underemployment lends support to the argument that structural changes, in part, account for deteriorating conditions in the modern labor market.

The Distribution of Individual Attributes and Employment Hardship

To begin addressing trends in employment hardship during post-recessionary periods, I examine each form of hardship in the four periods. Panel A of Table 3.2 shows the distribution of employment states, for men and women in 1971-73, 1977-79, 1987-89, and 1991-93 and documents the extent to which employment hardship has changed for the general population. Panel B presents trends in hardship for underemployed persons only, and shows how each type of hardship contributes to trends in overall underemployment. Notice the difference in sample sizes across the two panels. In Panel A, when the population includes all members of the labor force, such as those adequately and marginally employed, underemployment and employment sum to 100 percent, but because total observations may include persons in more than one state of hardship at the same time, percentages for the four types of hardship do not sum to the percent marginally employed.

Trends in Table 3.2 show that the percent of persons reporting employment hardship rose during post-recessionary periods since 1971. During the recovery periods, underemployment for men rose from almost 20 to over 22 percent. Overall, levels of underemployment were fairly high in each period. In fact, at least 20 percent of men and women were underemployed, with the exception being men during 1977-79 and women

Table 3.2 Employment States for Men and Women, aged 18-64, by Post-Recessionary Period[a]

Panel A.

	Post-Recessionary Periods							
	1971-1973		1977-1979		1987-1989		1991-1993	
	Men	Women	Men	Women	Men	Women	Men	Women
Employed	80.3	80.0	84.6	75.4	81.3	80.8	77.6	80.4
Underemployed	19.7	20.0	15.4	24.6	18.7	19.2	22.4	19.4
Unemployed	3.6	1.9	3.7	2.1	4.9	2.3	6.8	3.1
Low wages	4.1	10.2	5.9	18.9	8.0	11.7	9.7	11.4
Low hours	2.5	3.6	2.8	4.6	5.8	3.9	12.1	11.0
Discouraged	14.6	10.6	5.8	4.3	2.7	2.1	1.8	1.1

[a] Percents and means are weighted to approximate population; N's are unweighted.

Note: (1) Only two states, employed and underemployed, sum to 100%. Because people experience more than one form of hardship simultaneously, the four components of underemployment do not sum to the percent underemployed.
(2) Ns are 283, 201 for men, and 203,585 for women for employed, underemployed, unemployed, and discouraged. For low wages they are 231,549 for men and 156,799 for women and for low hours they are 237,370 for men and 163,065 for women.

Panel B. Maringally Employed Men and Women

	1971-1973		1977-1979		1987-1989		1991-1993	
	Men	Women	Men	Women	Men	Women	Men	Women
Unemployed	18.9	9.4	24.0	8.2	26.1	12.1	31.3	15.4
Low wages	21.4	48.8	50.2	79.2	49.5	66.9	66.9	17.3
Low hours	12.5	17.8	18.3	18.6	47.2	45.6	75.9	55.9
Discouraged	74.1	53.1	37.9	17.3	14.6	11.2	7.9	5.1

[a] Percents and means are weighted to approximate population; N's are unweighted.

[b] Percents for the underemployed population do not sum to 100, since persons may be in more than one state of hardship at the same time.

Note: (1) Universe includes only persons underemployed.
(2) In general, Ns are 52,647 for men, and 44,126 for women.

Source: 1971-1993 Current Population Survey, Annual Demographic File

during 1987-89. This trend shows that although hardship exists during times of recovery, the general measure of underemployment was relatively stable during these periods.

Three of the four components of underemployment increased more dramatically than the overall measure of hardship. The percent of the sample population that was unemployed rose consistently across all four recoveries. Between 1971 and 1993, unemployment rose from 3 to 7 percent for men, and from 2 to over 3 percent for women.

Low-wage and part-time work also rose throughout the time periods. The rise was especially steep for part-time work (from 2.5 for men and 3.6 for women to 12.1 for men and 11.0 for women between 1971-73 and 1991-93). As expected, a higher percentage of women than men earned low wages, although the sex gap was considerably smaller by the final post-recessionary period (from 4.1 for men and 10.2 for women to 9.7 for men and 11.4 percent for women between 1971-73 and 1991-93). Unlike men, whose representation in low wage jobs gradually increased, the share of women working for low pay peaked immediately after the 1974-75 recession and then declined.

As I described earlier in this chapter, the measure of worker discouragement captures what people believe about the job market and is therefore subjective in contrast to the behaviors addressed by other forms of hardship. In addition, it is likely to be lower during periods of recovery, because people are likely to be more optimistic about employment. Following this line of reasoning, Panel A shows that both men and women

were less discouraged about work prospects in each period after 1971-1973. In fact, the percent of discouraged workers declined from over ten in the early 1970s to under two percent by 1991-93. The decline in discouraged workers contributed trends in the overall underemployment, by offsetting increases in three other forms of hardship. As a result, underemployment did not rise substantially over time, although unemployment, low-wage, and part-time work all increased from 1971-1993.

Panel B of Table 3.2 shows notable shifts in the types of marginal employment over time among the underemployed population. Like the general population, being unemployed, earning low-wages, and working-part time increased between the 1970s and 1990s. For example, in the early 1970s, only 13 percent of men and 18 percent of women worked part time, but by the final post-recessionary period, three-quarters of men and 56 percent of women were employed part-time. Unemployment trends were less dramatic, but nonetheless significant, leading to 31 percent of men and 15 percent of women being unemployed in the 1991-93 period. Low wage work almost tripled for men, but surprisingly women were less likely to work for low-pay during the later periods. Like the pattern in panel A, womens low-wage work peaked in the late 1970s and declined through 1993. Consistent with trends for the larger population, the share of discouraged workers among the underemployed dropped from 1971 to 1993.

So far, the findings reveal that certain forms of employment hardship have become more resistant to change since the early 1970s, supporting my hypothesis that hardship has increased from 1971 to 1993. In line with recent research, marginal employment rose more for men than women during these years (Farley 1996, Thurow

1996). This, in turn, leads to questions about whether changes in individual attributes among the underemployed may explain period trends and gender differences in hardship. Although the issues are addressed in more detail using multivariate methods in Chapter 4, at this point it is useful to examine changes in the distribution of theoretically meaningful controls variables during each post-recessionary period. These distributions begin to offer support for my hypotheses.

Tables 3.3 and 3.4 describe how demographic and geographic attributes of the general population and the marginally employed population have changed during the 22 year period. Table 3.3 shows trends in demographic and geographic characteristics of the entire sample population within each of the four post-recessionary periods. Two differences stand out.

First, marital status varied for men and women in the labor force. Irrespective of time period, more men than women were married. This pattern diminished somewhat over time, but an 8 percentage point difference remained during the early 1990s. In keeping with the general decline in marriage mentioned in Chapter 2, rates for both sexes dropped, from 79 and 63 percent to 63 and 56 percent for men and women, respectively. Patterns of participation varied for unmarried men and women. Previously married persons increased their share of the labor force by the early 1990s, however, during each recovery there were at least twice as many formerly women, as men, in the labor force. For the most part, these women participated at very steady rates across each period. Participation was very similar for never and formerly married women. Like previously married women, singles have been represented in the labor force at fairly

Table 3.3 Trends in Demographic and Geographic Characteristics of all Men and Women aged 18-64, 1971-93[a]

	1971-1972		1977-1979		1987-1989		1991-1993	
	Men	Women	Men	Women	Men	Women	Men	Women
Demographic attributes								
% Black	9.7	12.6	9.6	12.3	10.1	12.9	12.3	14.1
% White	89.1	86.0	88.6	85.7	86.8	83.9	85.0	83.4
Age	39.2	38.5	37.8	37.0	37.7	37.3	39.4	39.7
Marital Status								
% Married	78.8	62.8	72.1	59.9	65.7	58.6	62.4	56.1
% Previously Married	5.5	18.1	7.8	19.0	10.0	19.1	11.4	21.4
% Never Married	15.7	19.1	20.1	21.2	24.3	22.3	26.3	22.4
Education								
% Less than High School	32.8	26.4	24.1	19.6	16.9	11.9	17.5	12.8
% High school	37.3	47.9	38.3	47.5	39.3	44.5	37.4	40.2
% Some college	13.9	13.2	17.1	17.1	18.9	22.1	21.1	24.5
% 4 yrs college	9.1	8.6	11.4	10.1	14.2	13.4	14.7	15.0
% 5+ yrs college	6.8	3.9	9.0	5.7	10.9	8.0	9.3	7.6
Geographic attributes								
% Rim	34.5	35.8	32.9	34.0	1.8	1.2	31.3	30.7
% Center City	29.4	33.4	25.7	28.3	25.7	26.6	23.5	24.5
% Suburb	39.3	36.2	38.6	37.2	38.9	38.6	37.8	38.4
% Not in MSA	31.3	30.3	27.6	26.7	20.1	19.3	22.0	20.5
% Small MSA[b]	na	na	8.1	7.9	15.4	15.5	16.6	16.5
N	62,443	36,591	71,327	46,849	75,870	59,756	55,319	46,012

[a] Percents and means are weighted to approximate population; N's are unweighted.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: na=this distinction is not available for the early years of the CPS.

Source: Table 3.2

constant levels for the past 22 years. I found slightly more single women in the labor force during each recovery period, with a total increase of about 3 percent since 1970. On the other hand, since that time, single men have increased their share of the labor force substantially, from 16 to 26 percent by the early 1990s. Again, this substantiates the demographic shift away from marriage.

The second major difference between men and women was for educational attainment. Irrespective of time period, more women were likely to obtain a high school diploma and men posted higher drop out rates. The difference in finishing secondary schooling was greatest in the early 1970s, with about 37 and 48 percent of men and women, respectively, completing grade 12. By 1992, 40 percent of women, and nearly as many men, attained this level of schooling. Both sexes posted similar college completion rates, but more women reported at least some higher education, including associate and two year degree programs, and men were consistently more likely to obtain over five years of college.

I found a slight shift in the race composition over time. In 1972, black men and women composed about 10 and 13 percent of the population, respectively. By the period following the 1990 recession, their shares increased to 12 and 14 percent.

In general, about one third of the population resided in rim states. Although there was not a large sex difference, residence in this region declined 3 and 5 percent for men and women, respectively, through the 1980s. By the final post-recessionary period, this trend stated to reverse. People also moved out the center cities. From 1971 to 1993, there was about a 10 percent drop in the number of women living in urban areas, so that

by the final post-recessionary period, less than one-quarter resided in center cities. Patterns for men were similar, although not as dramatic. Both sexes left rural areas during the 1970s and 1980s. However, this trend started to reverse by the early 1990s. The exodus from urban and rural places corresponded to an increase in people residing in smaller metropolitan areas.

Some of the trends documented in Table 3.3 are repeated in Table 3.4 for the underemployed population. However, by and large, there were more singles and minorities in this group. In addition, the overall level of education was lower than for the total population. During the early 1970s, for example, black men and women made up about 15 and 18 percent of the underemployed work force, compared to 84 and 81 percent of white men and women. Twenty years later, the share of whites had declined slightly, to about 78 percent, and the percentage of black men and women rose to over 19 and 20 percent, respectively. That the percentage point difference between blacks and whites remains relatively unchanged suggests that marginal employment can not be reduced to an issue of racial discrimination, but is more likely a phenomena experienced unilaterally.

In general, trends for marital status and education shown in Table 3.4 follow the demographic patterns described in Table 3.3. Although the majority of the underemployed were married in the early 1970s, the share of married persons declined substantially by 1993. This was especially true for men, so that by the early 1990s there was only a 5 percentage-point difference between married and single men. Additionally, although a larger share of men than women were married in 1971-1973 (64 and 53

Table 3.4 Trends in Demographic and Geographic Characteristics of Underemployed Men and Women, aged 18-64: 1971-73, 1978-79, 1987-89, 1991-93[a]

	1971-73		1977-79		1987-89		1991-93	
	Men	Women	Men	Women	Men	Women	Men	Women
Demographic attributes								
% Black	14.5	18.1	14.9	14.6	17.8	18.7	19.0	19.7
% White	84.0	80.6	82.8	83.5	78.6	78.3	78.3	77.6
Age	35.3	35.6	33.2	35.5	33.7	34.8	35.4	36.1
Marital Status								
% Married	63.8	53.4	48.6	56.1	44.3	49.4	45.5	47.6
% Previously Married	7.8	19.7	9.6	16.9	11.7	22.3	13.7	22.2
% Never Married	28.5	26.8	41.8	27.0	44.0	28.3	40.8	30.2
Education								
% Less than High School	42.5	36.3	35.2	27.4	30.4	19.8	28.3	20.6
% High school	36.8	44.2	37.7	47.1	42.0	47.3	43.3	47.0
% Some college	12.1	11.5	14.9	14.6	15.3	18.5	17.8	20.2
% 4 yrs college	5.1	5.9	6.4	7.4	6.8	8.8	7.7	8.9
% 5+ yrs college	3.5	2.2	5.8	3.6	5.4	5.7	2.9	3.2
Geographic attributes								
% Rim	36.4	40.3	35.3	34.4	32.6	31.0	33.3	33.3
% Center City	31.5	34.0	28.6	26.8	28.9	27.4	26.0	24.7
% Suburb	34.7	32.6	32.3	35.6	32.1	32.2	32.3	32.0
% Not in MSA	33.8	33.4	29.9	29.1	24.4	24.9	25.1	25.9
% Small MSA[b]	00.0[c]	00.0[c]	9.0	8.6	14 7	15.5	16.7	17.4
N	12,079	7,331	11,052	11,816	13,977	11,593	12,345	9,240

[a] Percents and means are weighted to approximate population; N's are unweighted.

[b] These MSAs are too small to be identified for confidentiality reasons.

[c] This distinction is not available for the early years of the CPS.

Source: Table 3.2.

percent, respectively), this patterns reversed itself by the early 1990s, so that 46 and 47 percent of underemployed men and women were married. At the same time, never-married persons among the underemployed rose, especially for men. During the 1970s, roughly the same percentages of men and women were single, but by the early 1990s, about 10 percent more men were never-married (41 percent and 30 percent for men and women, respectively).

The trend of increasing education described in Table 3.3 is also present for the underemployed population. Distributions in Table 3.4 show a decline in persons with less than a high school diploma, and increases in those with completing high school and college. In 1971-1973, 43 percent of men and 36 percent of women did not complete high school. By the final post recessionary period, this declined to 28 and 21 percent for men and women, respectively. During the early 1970s, about 12 percent of men and women had some college schooling, and just over 5 percent completed four years of college. Two decades later, nearly 18 percent of men and over 20 percent of women reported some training past high school, and 8 percent of men and 9 percent of women attained a college diploma. Therefore, although some of the patterns shown here for the underemployed are somewhat different from the demographic trends reported in Table 3.3 (for example, among the marginally employed, women report slightly higher levels of college education than men), in general the demographic trends for the marginally employed were consistent with larger population shifts.

As job growth moved from interior states to states where land is cheaper and more plentiful, and where high tech centers were quickly taking root, the share of

underemployed men and women living in rim states declined somewhat from 1971 to 1993. During the early 1970s, 36 and 40 percent of marginally employed men and women resided in rim states, but by 1991-1993, approximately one-third of persons lived in these states. Therefore, during a 20 year period of regional growth, there was a slight decline in the percent of persons living in this area. Trends in Table 3.4 show that the share of underemployed persons in center cities and rural areas declined over time (from 32 percent for men and 34 percent for women, to 26 percent for men and 27 percent for women from 1971-73 to 1991-93), and that smaller metro areas increased their share of marginally employed men and women from 1971 to 1993.[10] The percentages of those residing outside the center city of a large MSA remained fairly stable over time.

To sum, the distributions presented in Table 3.4 provide an overview of individual attributes for underemployed persons. In general, it shows that demographic trends documented over the past two decades for the general population are also present among the marginally employed. In addition, Table 3.4 describes patterns of sex differences and illustrates how men and women differ over time by factors expected to influence employment hardship.

In addition to the trends in individual attributes for the the entire population and underemployed persons documented in Tables 3.3 and 3.4, I also present distributions

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[10] This may, in part, be an artifact of changes in confidentiality restrictions and definitions of the MSA. Over the past 28 years, the minimum population required for area to be achieve metropolitan status has changed, resulting in increasing numbers of MSAs.

of demographic and geographic characteristics for men and women, across each type of hardship. Tables 3.5 and 3.6 present these distributions for the entire population and for underemployed persons, respectively. Distributions in Table 3.5 show that, in general, the percent of black men and women is higher than whites for each for of hardship. For example, one-third of black men and 20 percent of white men are underemployed. The difference in percentage points between blacks and whites is lower for part-time and discouraged worker, and disappears between women in the case of low-wage employment.

Patterns in Table 3.5 suggest that the share of persons reporting employment hardship declines within broad age categories, with a higher percentage of hardship among the youngest workers. Also, a smaller percentage of married persons, versus unmarried, report hardship. For example, 16 percent of married men are underemployed, but 26 percent of previously married men and over 34 percent of single men experienced employment hardship. This is consistent with the general patterns for women, and is repeated across each outcome, with single persons posting the highest percentages of employment hardship.

The percent of men and women experiencing hardship declines with each additional level of education (with the exception of men who are discouraged). For example, over one-third of men and over 30 percent of women with less than a high school diploma are underemployed. This declined (to 25 and 22 percent, for men and women, respectively) for those with the degree, and to nearly 12 percent for men and

Table 3.5 Distribution of Demographic and Geographic Characteristics for Men and Women, aged 18-64, across forms of Employment Hardship, 1971-93[a]

	Underemployed		Unemployed		Low wages		Low hours		Discouraged	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Demographic attributes										
% Black	33.1	26.4	12.4	5.7	16.9	10.1	16.5	14.0	3.9	1.5
% White	19.6	17.7	5.7	2.4	7.8	10.0	11.0	10.4	1.6	1.2
Age 18-33	25.4	25.0	6.4	4.1	10.5	15.1	9.8	13.9	7.9	1.3
Age 35-54	14.0	17.3	3.4	2.5	4.2	8.9	6.1	10.0	4.8	1.3
Age 55-64	14.2	13.9	2.8	1.4	5.3	10.5	5.8	8.4	5.0	1.2
Marital Status										
% Married	16.1	16.7	4.3	1.8	5.9	9.9	9.6	9.7	1.4	1.1
% Previously Married	26.8	20.4	8.9	3.5	10.4	11.5	15.5	12.0	2.5	1.2
% Never Married	34.6	26.4	11.3	5.3	19.2	16.1	17.8	14.1	3.2	1.6
Education										
% Less than High School	35.6	31.7	11.6	4.4	20.8	27.5	19.2	17.9	3.7	1.7
% High school	25.5	22.9	7.5	3.4	10.6	14.1	14.1	13.0	2.3	1.4
% Some college	18.7	16.2	5.4	2.8	7.4	8.9	10.2	9.0	1.4	0.9
% 4 yrs college	11.6	11.7	3.2	1.8	4.0	4.6	6.2	7.1	0.7	1.1
% 5+ yrs college	7.1	8.4	1.7	1.2	2.1	2.7	3.9	3.2	0.9	1.2
Geographic attributes										
% Rim	23.6	21.3	6.2	2.9	11.6	13.7	13.3	11.9	2.2	1.0
% Not in Rim	21.4	18.9	6.8	3.0	8.6	10.5	11.6	10.8	1.9	1.3
% Center City	24.4	19.8	7.7	3.8	11.0	11.8	12.7	10.3	2.5	1.3
% Suburb	18.9	16.3	5.6	2.8	6.9	8.3	10.5	9.4	1.7	1.3
% Not in MSA	25.2	24.8	6.8	2.4	12.8	17.2	14.2	14.6	2.2	1.3
% Small MSA[b]	22.3	20.7	6.9	3.0	9.4	12.1	12.3	18.0	1.7	1.1

[a] Percents are weighted to approximate population; N's are unweighted.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: Ns are 283,201 for men and 203,585 for women.

Source: Table 3.2

women with four years of college. Similar patterns persist for both sexes across all five forms of hardship.

In general, persons living in rim regions report somewhat higher percentages of employment hardship than residents in the rest of the county (with the exception of unemployment). For example, 12 percent of men and 14 percent of women in the rim earn low pay, but only 9 and 11 percent of their counterparts in non-rim states experienced this form of hardship. Persons in the center cities and rural areas post the highest percentages of employment hardship, and those in the suburbs report the lowest.

Table 3.6 shows demographic and geographic patterns across hardship for the underemployed population. Like the larger population, a higher percent of blacks than whites experience each form of employment hardship. Otherwise, the distributions for demographic attributes are different from those discussed in Table 3.5, and describe features unique to the underemployed population. For example, the percent of men experiencing part-time work peaks for middle-aged workers and declines thereafter.

Patterns in marital status and educational attainment also differ between the general population and the underemployed sample. For example, whereas in Table 3.5, married persons posted lower percentages of employment hardship, in Table 3.6, single persons were better off in terms of part-time work. In contrast to Table 3.5, the percent of persons within educational categories reporting hardship does not steadily decline. In fact, for part-time

Table 3.6 Distribution of Demographic and Geographic Characteristics of Underemployed Men and Women, aged 18-64, across forms of Marginal Employment, 1971-93[a]

	Unemployed		Low wages		Low hours		Discouraged	
	Men	Women	Men	Women	Men	Women	Men	Women
Demographic attributes								
% Black	37.5	21.1	58.5	68.7	49.4	52.2	7.9	5.6
% White	28.8	13.7	45.1	61.1	55.0	57.8	8.3	6.7
Age 18-33	25.4	16.5	49.5	67.0	35.5	54.5	31.2	5.0
Age 35-54	24.6	14.6	41.8	58.9	39.3	56.8	34.2	7.3
Age 55-64	19.6	10.0	35.5	67.1	37.2	56.8	35.3	8.9
Marital Status								
% Married	26.8	11.2	41.6	62.7	55.6	57.1	8.9	6.7
% Previously Married	33.3	17.1	42.5	60.4	56.9	58.0	9.5	6.1
% Never Married	32.3	20.2	59.2	67.6	50.7	52.4	9.2	6.1
Education								
% Less than High School	32.8	14.0	55.7	71.5	53.1	55.9	10.5	5.5
% High school	29.4	14.9	47.0	66.7	54.3	55.6	9.0	6.0
% Some college	28.9	17.5	46.0	59.4	53.9	54.9	7.5	5.5
% 4 yrs college	27.7	14.9	42.1	47.1	52.6	59.5	6.1	9.5
% 5+ yrs college	24.1	14.1	36.1	42.0	53.6	55.2	12.8	13.9
Geographic attributes								
% Rim	21.1	13.6	45.1	68.8	38.7	55.0	33.7	5.1
% Not in Rim	26.3	16.0	41.3	61.0	36.9	56.4	31.0	5.2
% Center City	31.7	19.3	52.1	65.2	50.9	51.0	10.0	6.7
% Suburb	30.6	16.7	42.7	57.5	54.6	56.6	9.3	7.8
% Not in MSA	26.9	9.6	52.3	69.0	55.2	57.8	8.5	5.2
% Small MSA[b]	31.0	14.7	48.8	64.1	54.3	58.6	7.4	5.1

[a] Percents and means are weighted to approximate population; N's are unweighted.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: Ns are 52,647 for men and 44,126 for women.

Source: Table 3.2

work, it peaks for women with four years of college, and among discouraged men and women, the most educated persons report the highest percent of hardship.

In general, geographic distributions of hardship for the underemployed in Table 3.6 are similar in pattern to those for the entire population (see Table 3.5). Persons in center cities post lower percentages of part-time work than those in the suburbs, but overall, suburban residents are better off in terms of hardship. Like general population, although rural residents in Table 3.6 report lower levels of unemployment, they have the highest percentage of part-time and low-wage workers.

To sum, Tables 3.5 and 3.6 show the distribution of demographic and geographic attributes across five forms hardship. With the exception of race, there are notable differences between the two populations for demographic characteristics. However, both populations show similar geographic distributions of marginal employment.

Finally, Table 3.7 documents demographic and geographic characteristics of men and women within each form of employment hardship. Column 1 shows the demographic and geographic characteristics for men and women who are underemployed and essentially summarizes trends presented by time period in Table 3.7, and then columns 2-5 display similar distributions for each of the four types of hardship. Accordingly, blacks composed roughly 17 percent of the underemployed population. Likewise, about half were married, and 34 percent of men and 25 percent of women did not complete high school. Again, approximately one-third of underemployed persons resided in rim states.

Table 3.7 Demographic and Geographic Characteristics of Men and Women, aged 18-64, by Forms of Employment Hardship, 1971-93[a]

	Underemployment		Unemployed		Low wages		Low hours		Discouraged	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Demographic attributes										
% Black	16.6	17.6	21.7	27.2	18.1	17.5	17.3	18.9	14.8	15.0
% White	80.9	80.1	75.8	70.7	79.0	80.2	80.3	78.5	82.9	82.7
Age	35.3	36.1	34.5	34.1	33.3	35.1	35.8	36.5	36.0	38.8
Marital Status										
% Married	50.7	51.7	44.6	31.7	41.8	53.5	48.0	50.5	57.6	51.2
% Previously Married	10.7	20.2	12.9	25.6	8.7	19.2	13.0	22.1	10.2	19.1
% Never Married	38.6	28.1	42.6	42.6	49.5	27.3	39.0	27.4	32.2	29.7
Education										
% Less than High School	34.1	25.3	35.5	24.4	35.7	28.2	34.3	26.1	36.9	21.3
% High school	40.0	46.6	40.9	48.1	39.6	48.5	41.4	47.1	37.9	43.4
% Some college	15.0	16.4	14.3	17.2	15.5	15.8	15.0	16.2	13.6	16.5
% 4 yrs college	6.5	7.9	6.5	7.6	5.5	5.4	6.5	7.9	6.0	11.2
% 5+ yrs college	4.4	3.8	2.8	2.7	3.8	2.2	2.9	2.8	5.7	7.6
Geographic attributes										
% Rim	33.3	33.3	29.2	29.8	36.9	37.4	33.9	32.6	34.0	27.0
% Center City	28.8	27.8	32.6	37.4	25.9	26.2	26.4	24.7	31.3	31.9
% Suburb	32.9	33.2	31.6	33.0	28.7	31.0	33.1	31.7	34.9	37.5
% Not in MSA	28.3	28.0	24.7	18.7	33.6	31.9	27.4	29.8	27.9	22.3
% Small MSA[b]	10.1	11.0	11.2	10.8	11.8	10.9	13.1	13.8	5.9	8.4
N	264,962	189,223	47,452	39,052	34,261	28,763	47,229	38,882	47,452	39,052

[a] Percents and means are weighted to approximate population; N's are unweighted.

[b] These MSAs are too small to be identified for confidentiality reasons.

Source: Table 3.2

With respect to metropolitan residence, most underemployed persons lived in the suburbs of large MSAs, 28 percent lived center cities or rural areas, and the remaining 11 percent lived in small metropolitan areas.

Because underemployment is composed of four poor work outcomes, the remaining columns in Table 3.7 gives us an idea of how each form of hardship contributes to overall underemployment. For example, blacks are more disadvantaged than other groups with respect to unemployment. In this case, 22 and 27 percent of black men and women, respectively, were unemployed. On the other hand, the share of blacks that earned low wages or worked part-time was similar to the average for all underemployed (shown in column 1), and their share of the discouraged population was slightly lower than for the underemployed. In general, the percent of black men and women comprising each for of hardship was similar, with the exception of unemployment, where nearly 22 percent were men and over 27 percent were women.

Although half of underemployed men and women were married, the share of married persons varied across the other four outcomes. Only 32 percent of unemployed women were married compared to 45 percent of similar men. About half of the women who report earning low-wages, working part-time, or being discouraged were married. This was not the case for men, where 42 percent of low-wage earners and over 57 percent of discouraged workers were married. A greater percentage of marginally employed women than men were previously married. For example only 11 percent of underemployed and discouraged men were formerly married, and over 20 percent of women reported this status, but for the unemployed the percent of previously married

women and men were 26 and 13 percent, respectively. On the other hand, a greater percentage of marginally employed men than women were never married.

In general, irrespective of poor work outcome, a higher share of women than men completed high school, and a larger share of men, than women, did not graduate. For example, approximately one-third of underemployed men had less than a high school diploma, whereas only a quarter of such women reported this level of education. On the other hand, 47 percent of underemployed women had a high school diploma, and only 40 percent of similar men completed grade 12. Marginally employed men and women were similar in terms of education past high school. Discouraged workers were an exception to these patterns. In this case, a higher percentage of men than women complete high school (37 and 21 percent, respectively), but a larger share of women completed four years of college (6 and 11 percent, for men and women, respectively).

Geographically speaking, rim states varied by type of marginal employment, but there was little difference between men and women. One third of underemployed men and women lived in this region. However, approximately 37 percent of low-wage workers were rim residents, whereas 29 percent of unemployed persons lived in this area. Discouraged men and women differed geographically; in this case 34 percent of men and 27 percent of women resided in rim states.

In terms of metropolitan status, approximately 28 percent of the underemployed workers lived in center cities and rural areas and one-third lived in the suburbs. Residents in smaller metro areas were much better off, in terms of hardship. For example, only 10 percent of men and 11 percent of women who were underemployed

lived in these areas. In general, patterns only show slight differences between marginally employed men and women and residential status. However, 25 percent of unemployed men, but only 19 percent of such women, lived in rural areas.

Conclusions

To sum, the descriptive tables begin to offer some support for the expectations outlined earlier in this chapter. Although not all forms of employment hardship rose from 1971 to 1993, certain types-- being unemployed, earning low-wages and working part-time-- did so. That this hardship persisted during economic upswings suggests that poor work outcomes have become a prominent feature of the U.S. economy. Although marginal employment rose for both sexes, a higher percentage of men than women reported being unemployed, earning low-wages, and working part-time by the final time period.

Distributions of the demographic variables also support my hypotheses. During the post-recessionary periods, the share of underemployed blacks rose, while whites declined. Trends reviewed in Chapter 2 and those shown in Table 3.3 and 3.4 document increases in educational attainment for the general population from 1971 to 1993, and attainment also rose among the marginally employed. As jobs moved to the rim states, the percentage of marginally persons in this region declined. In additional, persons in smaller MSAs, the outlying areas characterized by employment expansion, made up the smallest share of the marginally employed workforce.

In Tables 3.5 and 3.6, I examine distributions of demographic and geographic attributes across the five employment outcomes. Given the variation between these the overall population and the underemployed population, recent patterns in employment hardship for the labor forces described in Chapter 2 may differ from the trends and patterns I document for the marginally employed population. A comparison of Table 3.5 and 3.6 shows how the distribution of demographic characteristics across employment hardship differs between the entire population and the underemployed. However, these two populations are similar with respect to geographic attributes and marginal employment. The tables described in the latter portion of this chapter offer some support for my expectations, and begin to hint at the multivariate findings.

Chapter 4

Trends in Men and Women's Employment Hardship Since 1970

The analyses and discussion presented in this section expand on the marginal employment patterns found in Chapter 3. In multivariate models, I examine trends in poor work outcomes over time, what factors affect employment hardship, and how these processes differ by sex. First, I describe trends in employment hardship since 1971 for all men and women, and then I replicate the analysis for the underemployed. Next I compare the likelihood of being marginally employed, versus being unemployed, over each time period. Finally, to explain the effects of period that persist across these analyses, I control for theoretically relevant demographic and geographic attributes.

In this chapter, I address three main questions. First, I estimate multivariate models to see if marginal employment increased since 1971. Then, I examine whether and how sex is related to employment hardship. Finally, I assess the extent to which demographic and geographic factors differ for men and women, and how these controls affect marginal employment.

Trends in Employment Hardship for Men and Women Since 1971

By pooling CPS data across post-recessionary time periods, I predict employment hardship for the entire study population net of period. Table 4.1 presents regression coefficients and standard errors. The first period of recovery, 1971-1973, is the referent for the three subsequent periods. The object of this analysis is to examine whether and how poor work outcomes have changed from 1971 to 1993.

My underlying hypothesis is that employment hardship has increased for both men and women. Given transformations in skills and the shift from stable, manufacturing jobs to the multi-tiered service sector, I expect that growth in poor work outcomes is driven largely by the rise of low-wage and part-time jobs. Distributions in Table 3.2 document the prevalence of these forms of hardship: the percent all persons earning low-pay and working part-time increased for the entire population and the share of underemployed men and women working part-time also rose.

The results shown in Table 4.1 offer some support for my hypothesis. Panel A presents regression estimates for each form of hardship for the entire male population. Likewise, Panel B presents these equations for women. The first column shows that, relative to 1972, although men were significantly less likely to be underemployed in 1978 and 1988, they were more likely to by underemployed by 1992. In contrast, the chances of a woman being underemployed were greater in 1978, and then declined by the early 1990s, relative to 1972.

Because underemployment is a composite measure consisting of four different forms of marginal employment, I consider each type separately to examine how different outcomes varied over time. A quick glance shows at columns 2-5 shows that the divergent patterns found in the underemployment models for men and women were due largely to differences in the types of employment hardship.

Beginning with unemployment, I find a similar pattern for men and women. Unemployment rose during both 1988 and 1992, relative to 1972. Contrary to my initial hypothesis, but consistent with patterns in Table 3.2, women were significantly less

Table 4.1 Trends in Forms of Marginal Employment, Men and Women since 1971-73[a]

Panel A. Logistic regression estimates for Men aged 18-64

	Underemployment		Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE	b	SE
Period (ref=circa 1972)										
circa 1978	-0.273	0.010	-0.033ns	0.020	0.108	0.018	0.002ns	0.023	-0.828	0.014
circa 1988	-0.263	0.016	0.154	0.028	-0.027ns	0.028	0.431	0.030	-0.942	0.024
circa 1992	0.192	0.070	0.612	0.116	0.648	0.112	1.560	0.091	-2.060	0.221
Intercept	-1.433	0.006	-3.228	0.013	-2.875	0.012	-3.546	0.015	-1.953	0.008
-2 log-likelihood	864.465		63.688		71.547		406.188		4668.842	
N	283,170		283,170		237,344		231,518		283,170	

Panel B. Logistic regression estimates for Women aged 18-64

	Underemployment		Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE	b	SE
Period (ref=circa 1972)										
circa 1978	0.110	0.011	0.041ns	0.034	0.328	0.014	0.088	0.023	-0.827	0.020
circa 1988	-0.241	0.017	0.098	0.047	-0.373	0.025	0.394	0.030	-0.512	0.028
circa 1992	-0.181	0.082	0.449	0.190	-0.261	0.124	1.032	0.105	-2.220	0.312
Intercept	-1.230	0.008	-3.913	0.023	-1.785	0.010	-3.125	0.016	-2.283	0.011
-2 log-likelihood	452.391		8.932		1177.788		232.539		1924.648	
N	203,561		203,561		156,776		163,041		203,561	

[a] Baseline models predict the likelihood of an individual experiencing underemployment, unemployment, earning low wages, working for low hours, and being discouraged.

Note : ns= not significant, p>.05

Source: Table 3.2

likely to earn low wages in 1988 and 1992 than in the early 1970s. Men were more likely to report working for low-wages in 1978 and 1992. However, in line with original expectations, the chances of either sex being unemployed or working part-time involuntarily rose over time.

Finally, Table 4.1 documents how the log-odds of being a discouraged worker declined over time, relative to 1972. To some extent, the decline is due to measurement in the survey questions that capture this form of hardship. Recall that they ask whether people are not working because they believe no work is available (see Chapter 3). It may be that people report more optimism about work prospects during periods of economic expansion, even if they have not yet obtained a job.

To sum, certain forms of employment hardship increased during the 22-year period. The likelihood of being unemployed and working part time rose for both sexes, and working for low-waged increased for men. Sex differences were evident for the overall measure of hardship: men were more likely, and women less likely, to be underemployed by the early 1990s. In contrast, however, the chance of that men or women were discouraged about job prospects declined over time.

Because I am interested in the underlying sources of the employment hardship, I now examine how period affects each form of hardship among the underemployed. Trends for the underemployed population found in Table 4.2 are more consistent with expectations than those for the total population. Relative to 1972, men had higher log-odds of being unemployed, earning low pay, or working part-time during later post-

Table 4.2 Trends in Employment Hardship Among Underemployed Men and Women, 1971-93

Panel A. Logistic regression estimates for Men aged 18-64

	Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE
Period (ref=circa 1972)								
circa 1978	0.249	0.022	0.934	0.022	0.272	0.025	-1.087	0.019
circa 1988	0.480	0.032	0.529	0.035	0.783	0.034	-1.267	0.030
circa 1992	0.570	0.135	0.878	0.148	1.922	0.124	-3.049	0.228
Intercept	-1.399	0.015	-0.925	0.014	-1.771	0.016	0.595	0.012
-2 log-likelihood	279.209		1819.593		705.028		4508.824	
N	52,637		38,887		47,380		52,637	

Panel B. Logistic regression estimates for Women aged 18-64

	Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE
Period (ref=circa 1972)								
circa 1978	-0.048ns	0.035	0.927	0.024	0.001ns	0.025	-1.193	0.023
circa 1988	0.319	0.049	0.034ns	0.037	0.734	0.034	-0.441	0.032
circa 1992	0.659	0.204	0.138ns	0.192	1.715	0.148	-2.459	0.319
Intercept	-2.356	0.024	0.410	0.015	-1.476	0.017	-0.368	0.014
-2 log-likelihood	62.437		1708.175		612.662		2981.874	
N	44,118		33,380		40,070		44,118	

Note: ns = not significant, p>.05

Source: Table 3.2

recessionary periods. Consistent with earlier findings, the chances of a man not having a job and being discouraged about finding one declined between circa 1992 and 1972.

Women experienced similar trends in hardship. Relative to 1972, they were more likely to be unemployed or working part time in 1988 and 1992. Women were also less likely to report being discouraged during economic recoveries, although the coefficients suggest a small drop in this trend during the late 1980s. Unlike men, however, there was no change in the chances of a woman earning low wages over the past 22 years.

In general, the estimates shown in Tables 4.1 and 4.2 support my expectation that marginal employment has increased since 1972. Women and men both report increases in unemployment and part-time work, although they were less likely to be discouraged over time. One difference appeared for low-wage work and overall underemployment, which men (but not women) were more likely to engage in by 1992 compared to 1972. These findings are largely consistent with research documenting a rise in poor quality jobs since 1970 (Farley 1996, Bluestone and Harrison 1988, Loveman and Tilly 1988).

Although the percentages in Table 3.2 hinted at how forms of hardship differed from each other and the equations just described show how marginal employment varied over time, neither analyses indicates whether one outcome, versus another, was more prevalent during these periods. A critical distinction to make when describing states of employment hardship is whether persons have low quality jobs or are unemployed. Two factors affect this relationship. First, the analysis focuses on period of

time when unemployment is low and growth in GDP high. Second, the expansion of the service sector since 1970 has provided many jobs, although extant research suggests that many of these jobs are inadequate in terms of pay, hours, and benefits (Bluestone and Harrison 1988, Loveman and Tilly 1988). Additionally, based on findings from Table 4.2, I expect that low quality work outcomes have increased by the early 1990s. Therefore, I expect higher likelihood of low quality work, versus unemployment, during post-recessionary periods. To describe the likelihood of being in one poor work outcome versus another, I estimated logistic regression models where the dependent variable contrasts one employment state with another. Table 4.3 presents the period coefficients from models contrasting low-wage work and part-time work with unemployment.

The findings in Table 4.3 show interesting differences compared to Table 4.2. For example, in Table 4.2, men were more likely to earn low-wages during each post-recessionary period, relative to 1971-73. Period coefficients in Table 4.3, however, show this to be case for the 1987-89 period, but by the early 1990s, there was no difference between men's chances of earning low-pay compared to being unemployed. In addition, point estimates for women in Table 4.2 show that their chances of earning low-pay did not differ significantly from the baseline year. Findings in Table 4.3 suggest that women were actually less likely to work for low-wages than be unemployed. In other words, by the late 1980s through the early 1990s, women had higher chances of being unemployed, versus working in a low-paying job. Patterns in Table 4.2 suggest that the other form of low-quality work described, involuntary part-

Table 4.3 Logistic regression estimates contrasting states of Marginal Employment, Men and Women aged 18-64, 1971-93

Panel A. Men

	Low wages/ Unemployed		Low hours/ Unemployed	
	b	SE	b	SE
Period (ref=1972)				
circa 1978	0.007ns	0.026	0.034ns	0.030
circa 1988	-0.214	0.040	0.247	0.040
circa 1992	0.070ns	0.167	1.109	0.152
-2 loglikelihood	306.935		91.897	
N	53,917		29,114	

Panel B. Women

	Low wages/ Unemployed		Low hours/ Unemployed	
	b	SE	b	SE
Period (ref=1972)				
circa 1978	0.129	0.038	0.046ns	0.040
circa 1988	-0.594	0.055	0.255	0.054
circa 1992	-0.798	0.242	0.703	0.228
-2 loglikelihood	170.741		31.825	
N	26,668		19,534	

Note: ns= not significant, p>.05

Source: Table 3.2

time work, was increasingly more likely during each post-recessionary period, relative to the early 1970s. Period coefficients in Table 4.3 show that both men and women were more likely to work part-time, than be unemployed, following the recession of the early 1980s.

To sum, three main findings can be gleaned from Tables 4.1-4.3. First, certain types of employment hardship have increased from 1971 to 1993. The log-odds of being unemployed and working part-time rose for both men and women. Second, underemployment is a complex measure composed of four forms of hardship with determinants that often counteract each other. Third, although the chances of being unemployed, earning low-wages, and working part-time rose over time, both men and women were more likely to work part-time than be unemployed by the early 1990s.

The Effect of Demographic and Geographic Factors on Employment Hardship

The next section of analysis examines whether the observed trends in employment hardship remain after controlling for demographic and geographic attributes and how these patterns vary by sex. Prior research found that underemployment varied by sex, race, marital status, education, and residence (Jenkins, Findeis, and Hsu. 1996, Findeis 1995, Clogg and Sullivan 1983, Lichter 1988, Mutchler 1986). In line with this body of evidence, I expect that women, blacks, nonmarried, and less educated people are more likely to experience poor work outcomes. Also, consistent with ideas about industrial shifts and expansion, I hypothesize that hardship is more likely for city dwellers and lower for residents of the suburban ring. Along these lines, I also expect that the chances of poor work outcomes will be lower in southern

and western coastal states, where land and labor are cheaper and diversified economies are more prevalent (Kasarda 1995, Frey 1995).

The first step in this analysis to asses how men and women differ in their chance of being marginally employed. Table 4.4 describes the period effects on employment hardship, net of demographic and geographic controls, for the whole population. In addition, sex (referent is female) is also controlled. If this coefficient is significant, it indicates that women and men are different in terms of their likelihood of experiencing a particular outcome. In other words, I can determine whether and how men and women differ in terms of marginal employment. Findings suggest that net of other controls, women are more likely than men to be underemployed, earn low pay, and work part time. On the other hand, they are less likely than men to be unemployed or discouraged. Similar to earlier models (Table 4.1), all persons are more likely to be unemployed, earn low pay, or work part time by the early 1990s, relative to circa 1971.

To examine what demographic and geographic effects contributed to the difference between men and women, I estimated a logistic regression model with men and women together, and included an exhaustive series of sex interactions. Table 4.5 documents the differences between men and women, and the interaction coefficient shows the additional effect of being female for each contrast. In general, the effect of period on marginal employment varies by sex during the late 1970s and early 1980s. However, by the early 1990s, men and women were no different in terms of the influence of period on their employment outcomes.

Table 4.4 Logistic regressions estimates of Forms of Marginal Employment, Men and Women aged 18-64, 1971-93[a]

	Underemployment		Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE	b	SE
Period (ref=1972)										
1978	-0.047	0.009	-0.019ns	0.021	0.674	0.015	0.241	0.021	-1.045	0.013
1988	-0.146	0.014	0.126	0.030	0.318	0.024	0.741	0.027	-0.936	0.021
1992	0.096ns	0.012	0.612	0.108	0.703	0.093	1.583	0.076	-2.345	0.193
Demographic attributes										
Sex (ref=male)	0.291	0.008	-0.800	0.022	1.199	0.013	0.411	0.018	-0.358	0.013
Race (ref=white)	0.282	0.013	0.467	0.025	0.325	0.019	0.359	0.024	0.089	0.018
Age	-0.119	0.002	-0.091	0.005	-0.166	0.004	-0.083	0.005	-0.083	0.003
$Age^2(x10^{-2})$	0.123	0.003	0.075	0.007	0.191	0.004	0.087	0.006	0.077	0.004
Marital Status (ref=married)										
Previously Married	0.332	0.013	0.778	0.029	0.051	0.020	0.376	0.024	0.415	0.019
Never Married	0.584	0.011	0.774	0.025	0.615	0.017	0.519	0.024	0.464	0.016
Education (ref=less than high school)										
High school	-0.587	0.010	-0.576	0.022	-0.669	0.016	-0.618	0.021	-0.446	0.015
Some college	-0.790	0.014	-0.924	0.031	-0.820	0.021	-1.022	0.030	-0.568	0.020
4 yrs college	-1.088	0.010	-1.116	0.041	-1.381	0.029	-1.273	0.040	-0.705	0.024
5+ yrs college	-0.967	0.020	-1.373	0.056	-1.293	0.036	-1.447	0.053	-0.463	0.027
Geographic attributes (ref=non-rim)										
Rim	0.088	0.010	0.198	0.022	0.137	0.015	0.200	0.021	0.086	0.013
Residence (ref=center city)										
Suburb	-0.053	0.011	-0.276	0.023	0.055	0.017	0.016ns	0.023	-0.093	0.015
Not in MSA	0.163	0.011	-0.258	0.025	0.560	0.017	0.293	0.023	-0.108	0.016
Small MSA[b]	0.157	0.019	-0.176	0.041	0.407	0.027	0.241	0.037	0.020ns	0.031
Intercept	1.216	0.047	-0.687	0.102	-0.044ns	0.532	-1.852	0.096	0.340	0.066
-2 log-likelihood	25323.869		9550.649		25002.009		6837.615		15093.877	
N	394,955		394,955		315,634		312,025		394,955	

[a] Baseline models predict the likelihood of an individual experiencing underemployment, unemployment, earning low wages, working part time, and being discouraged.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note ns= not significant, p>.05 Source: 1971-1993 Current Population Survey, Annual Demographic File

Table 4.5 Logistic regression estimates for Female Interactions, Marginal Employment, Men and Women aged 18-64, 1971-93[a]

	Underemployed		Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE	b	SE
Period (ref=1972)										
1978	-0.359	0.012	0.289	0.027	1.221	0.029	0.474	0.031	-1.543	0.024
1988	-0.330	0.019	0.433	0.039	0.867	0.045	1.064	0.043	-1.704	0.037
1992	0.119ns	0.079	0.626	0.146	1.284	0.169	2.151	0.135	-3.579	0.246
Demographic attributes										
Sex (ref=female)	-0.371	0.094	-0.396ns	0.248	-0.439ns	0.209	0.661	0.207	0.878	0.183
Race (ref=white)	0.272	0.018	0.267	0.034	0.372	0.040	0.049ns	0.038	-0.219	0.032
Age	-0.129	0.002	0.023	0.007	-0.172	0.007	0.0001ns	0.007	0.093	0.006
$Age^2(x10^{-2})$	0.131	0.003	-0.042	0.009	0.219	0.009	0.009ns	0.009	-0.116	0.008
Marital Status (ref=married)										
Previously Married	0.620	0.019	0.324	0.041	0.065ns	0.050	0.180	0.046	-0.008ns	0.028
Never Married	0.825	0.015	0.131	0.032	0.768	0.034	0.179	0.036	-0.325	0.052
Education (ref=less than high school)										
High school	-0.584	0.014	-0.150	0.028	-0.203	0.032	-0.160	0.031	0.009ns	0.049
Some college	-0.767	0.018	-0.376	0.040	0.079ns	0.042	-0.449	0.045	-0.029ns	0.035
4 yrs college	-0.376	0.025	0.106ns	0.058	-0.294	0.059	-0.082ns	0.064	0.156	0.047
5+ yrs college	-0.152	0.027	-0.405	0.072	0.027ns	0.063	-0.404	0.077	0.416	0.052
Geographic attributes(ref=non-rim)										
Rim	0.093	0.015	-0.400	0.029	0.091	0.030	0.251	0.031	0.033ns	0.025
Residence (ref=center city)										
MSA	-0.118	0.016	-0.248	0.031	0.069ns	0.036	0.060ns	0.035	-0.018ns	0.028
Not in MSA	0.098	0.016	-0.406	0.032	0.777	0.035	0.042ns	0.036	-0.342	0.029
Small MSA[b]	0.100	0.020	-0.253	0.053	0.400	0.059	0.076ns	0.058	-0.198	0.049
Interactions with Female										
1978*female	0.691	0.020	-0.395	0.051	0.342	0.043	-0.391	0.045	-0.337	0.038
1988*female	0.420	0.029	-0.235	0.073	-0.128ns	0.065	-0.200	0.061	0.523	0.056
1992*female	-0.045ns	0.119	-0.013ns	0.266	-0.543ns	0.268	-0.272ns	0.209	0.371ns	0.481
Race*female	0.021ns	0.025	0.157	0.059	-0.113ns	0.058	0.178	0.053	-0.002ns	0.050
Age*female	0.013	0.005	-0.042	0.013	0.133	0.011	-0.001ns	0.011	-0.120	0.010

table continued

	Underemployed		Unemployed		Low wages		Low hours		Discouraged	
$Age^2(x10^{-2})$*female	-0.007ns	0.005	0.033ns	0.017	-0.162	0.013	-0.011ns	0.013	0.144	0.012
Previously Married*female	-0.542	0.026	0.540	0.067	-0.340	0.063	-0.094ns	0.058	0.169	0.052
Never Married*female	-0.563	0.023	0.577	0.062	-0.833	0.052	-0.250	0.054	0.522	0.046
High school*female	-0.003ns	0.022	0.099ns	0.056	-0.050ns	0.048	-0.067ns	0.046	0.322	0.043
Some college*female	-0.041	0.028	0.095ns	0.076	-0.532	0.063	-0.040ns	0.065	0.547	0.056
4 yrs college*female	0.195	0.035	-0.023ns	0.098	-0.393	0.082	0.206	0.087	0.348	0.701
5+ yrs college*female	-0.034ns	0.043	0.270ns	0.143	-1.074	0.097	0.232ns	0.115	0.699	0.085
Rim*female	0.008ns	0.019	0.289	0.053	-0.066ns	0.044	-0.205	0.044	-0.054ns	0.039
Suburb*female	0.136	0.022	0.045ns	0.056	-0.012ns	0.050	0.023ns	0.051	-0.020ns	0.043
Not in MSA*female	0.126	0.023	-0.152ns	0.061	-0.355	0.051	0.253	0.051	-0.170	0.045
Small MSA*female	0.098	0.037	-0.151ns	0.100	-0.168ns	0.085	0.142ns	0.081	0.085ns	0.075
intercept	1.562	0.064	-1.287	0.132	1.013	0.143	-2.133	0.146	-0.323	0.118
-2loglikelihood	28233.815		5054.094		15653.240		2232.818		17017.522	
N	394,955		74,968		54,249		67,141		74,968	

[a] Models predict the likelihood of an individual experiencing underemployment, unemployment, earning low-wages, working part-time, or being discouraged.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: ns= not significant, p>.01

Source: Table 3.2

The effect of race on employment hardship differs by sex for two of the five outcomes. The positive interaction coefficient for female and race suggests that black women are more likely to be unemployed and work part time than white women. The coefficient for race is also positive, suggesting that the difference between black and white women is larger than indicated by the interaction term alone.

Men and women also differ in terms of age and experience. As age increases, women are less likely than men to be unemployed or discouraged, but more likely than their male counterparts to be underemployed, or earn low-wages. At the oldest ages, women and men are somewhat more alike (for three of the five outcomes), but still differ in terms of their log-odds of earning low-pay and being discouraged.

The effect of marital status varies by sex. For example, formerly married and single women are more likely than their male counterparts to be unemployed. When the interaction coefficient (the extra effect of being female) is added to the coefficients for formerly married and never married persons in the top part of the model, the effects are even larger. Previously married women are actually less likely than men to earn low pay or work part time.

By and large, the effect of lower levels of education on employment hardship is the same for men and women. The effect of attending college differs for men and women with respect to their risk of being underemployed, earning low-pay, or being discouraged. For example, the negative sign on the interaction term, coupled with the negative effect of the corresponding coefficient for all persons, suggests that females with some college are less likely than their male counterparts to report

underemployment or low-wage work. The protective effect of education continues for women with four years of college. In this case, they are less likely than comparable men to be underemployed, earning low-pay, or working part-time. Although there are fewer sex differences at the highest level of education, women still have lower chances of working for low-pay, and a higher risk of being discouraged, than similar men.

The effect of living in the rim region differs for men and women for two outcomes: unemployment and low-wage work. In each case, women living the rim are less likely than comparable men to report hardship. Suburban men and women, and also those living in smaller metro areas, are quite similar in terms of their employment experiences (no difference on four of five outcomes). However, the effect of rural status on men and women's hardship varied for four of the five possible outcomes. For example, women in rural areas are more likely than their male counterparts to be underemployed, earn low-wages, and work part-time. Contrary to other differences, they are actually less likely to be discouraged.

Table 4.6 summarizes the differences just described in Table 4.5. From the cells in Table 4.6, there are 45 significant differences, that is, the effect of the coefficient was significantly different between men and women in 45 of 80 interactions. One key finding is that although the effect of period was different for men and women in circa 1978 and to a large extent in 1988, by 1992 men and women were comparable in the effects of period on marginal employment.

Findings in Table 4.6 suggest that there are four areas where women and men are significantly different in the effect of demographic and geographic characteristics

Table 4.6 Significant Differences in the point estimates for Employment Hardship between models for Men and Women [a]

	Underemployed	Unemployed	Low wages	Low Hours	Discouraged
Period (ref=1971-1973)					
1977-79	yes	yes	yes	yes	yes
1987-89	yes	yes	no	yes	yes
1991-93	no	no	no	no	no
Demographic attributes					
Race (ref=white)	no	yes	no	yes	no
Age	yes	yes	yes	no	yes
Age^2	no	no	yes	no	yes
Marital Status (ref=married)					
Previously Married	yes	yes	yes	no	yes
Never Married	yes	yes	yes	yes	yes
Education (ref=less than high school)					
High school	no	no	no	no	yes
Some college	yes	no	yes	no	yes
4 yrs college	yes	no	yes	yes	yes
5+ yrs college	no	no	yes	no	yes
Geographic attributes (ref=non-rim)					
Rim	no	yes	no	yes	no
Residence (ref=center city)					
Suburb	yes	no	no	no	no
Not in MSA	yes	yes	yes	yes	yes
Small MSA[b]	yes	no	no	no	no

[a] "Yes" indicates that the difference between coefficients in the male and female models is significant at $p<.05$.

[b] These MSAs are too small to be identified for confidentiality reasons. Source: Table 3.1, 4.4, 4.5

related to marginal employment. First, in general, the effect of age differs by sex, although the effect of being very old is similar for unemployed and low paid women and men. Second, the marital effects I described earlier are significantly different for men and women. For example, although both previously and never married persons were more likely to be unemployed, the relative strength of this effect was much greater, and significantly different, for women than for men. Third, the effect of education is significantly different for men and women who are earning low-wages or are discouraged, but not for unemployed persons or those working part time. Fourth, coefficients for living outside MSA boundaries are significantly different for women and men.

To sum, there are more differences than similarities between men and women in the effects of covariates of employment hardship. Most notably, although the effect of period was different for men and women in circa 1978 and to a large extent in 1988, by 1992 men and women were comparable in the effects of period on marginal employment. In addition, the effect of age, education, and not living in a metropolitan area, on marginal employment differed significantly for men and women. Tables 4.4-4.6 shows that women and men differ in their log-odds of marginal employment, and describes which demographic and geographic effects vary by sex. Given the differences documented in these tables, men and women's outcomes are examined separately in the remainder of this chapter.

When models are estimated separately for men and women, the addition of relevant controls changes hardship patterns (Tables 4.7 and 4.8, for men and women).

Recall from Tables 4.1 and 4.2 that men were more likely and women less likely to be underemployed by 1992. Net of demographic and geographic characteristics, however, women and men were just as likely to be underemployed in 1992 as their counterparts in 1972.

Because underemployment summarizes four very different dimensions of work hardship, I then predicted each poor work outcome separately, net of period and other controls. Period coefficients from these models in Tables 4.7 and 4.8 suggest that unemployment, earning low-wages, and working few hours have increased during a series of economic recessions and a period of industrial change in the United States.

Findings in Tables 4.7 and 4.8 also support my expectations about effects for demographic attributes. Net of period and other controls, black men were more likely than whites to experience many forms of marginal employment except working part-time and being discouraged. Marginally employed black women were more likely than their white counterparts to be unemployed, earn low pay, and work few hours, but less likely to report being discouraged. This suggests that blacks were more optimistic about finding employment, even though their work prospects were worse than whites.

In Chapter 3, I hypothesized that experience would reduced the likelihood of poor work outcomes. Coefficients in Tables 4.7 and 4.8 show this to be the case. Experience, as captured by age and age squared, decreased chances of underemployment. However, for men, this relationship is nonlinear, suggesting that at older ages, as age increased, so did the risk of being underemployed. Experience also

Table 4.7 Logistic regression estimates of Forms of Marginal Employment, Men aged 18-64, 1971-93[a]

	Underemployed		Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE	b	SE
Period (ref=1972)										
1978	-0.358	0.012	0.282	0.027	1.223	0.029	0.478	0.031	-1.543	0.024
1988	-0.336	0.019	0.439	0.039	0.867	0.045	1.060	0.043	-1.710	0.037
1992	0.096ns	0.012	0.628	0.146	1.284	0.169	2.149	0.135	-3.579	0.246
Demographic attributes										
Race (ref=white)	0.274	0.018	0.270	0.034	0.369	0.040	0.048ns	0.038	-0.216	0.032
Age	-0.129	0.003	0.023	0.006	-0.172	0.007	0.0001ns	0.007	0.093	0.006
$Age^2(x10^{-2})$	0.131	0.004	-0.042	0.007	0.219	0.009	0.009ns	0.009	-0.116	0.008
Marital Status (ref=married)										
Previously Married	0.621	0.020	0.324	0.041	0.369	0.040	0.180	0.046	-0.007ns	0.038
Never Married	0.825	0.015	0.131	0.032	0.065ns	0.050	0.179	0.036	-0.325	0.029
Education (ref=less than high school)										
High school	-0.585	0.014	-0.149	0.028	-0.204	0.032	-0.161	0.031	0.010ns	0.049
Some college	-0.765	0.018	-0.378	0.040	0.079ns	0.042	-0.448	0.045	-0.029ns	0.035
4 yrs college	-1.142	0.024	-0.270	0.053	-0.216	0.059	-0.532	0.064	0.125	0.047
5+ yrs college	-0.918	0.026	-0.782	0.068	0.052	0.063	-0.853	0.077	0.387	0.052
Geographic attributes (ref=non-rim)										
Rim	0.078	0.013	-0.393	0.029	0.099	0.030	0.245	0.031	-0.017ns	0.025
Residence (ref=center city)										
Suburb	-0.118	0.015	-0.246	0.031	0.069ns	0.036	0.064ns	0.035	-0.018ns	0.028
Not in MSA	0.098	0.015	-0.401	0.032	0.775	0.035	0.042ns	0.036	-0.342	0.029
Small MSA[b]	0.106	0.026	-0.283	0.053	0.409	0.059	0.096ns	0.058	-0.196	0.049
Intercept	1.567	0.064	-1.289	0.132	1.010	0.143	-2.131	0.146	0.318	0.118
-2 log-likelihood	19702.037		1205.508		5255.664		1171.451		7138.310	
N	228,363		40,781		29,289		36,447		40,781	

[a] Models predict the likelihood of an individual experiencing underemployment, unemployment, earning low-wages, working part-time, or being discouraged.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: ns=not significant, p>.05 Source: Table 3.2

Table 4.8 Logistic regression estimates for Forms of Marginal Employment, Women aged 18-64, 1971-93[a]

	Underemployed		Unemployed		Low wages		Low hours		Discouraged	
	b	SE	b	SE	b	SE	b	SE	b	SE
Period (ref=1972)										
1978	0.333	0.014	-0.108	0.044	1.564	0.031	0.083	0.032	-1.882	0.029
1988	0.085	0.021	0.197	0.061	0.739	0.047	0.863	0.044	-1.187	0.041
1992	0.073ns	0.089	0.613	0.222	0.740	0.209	1.878	0.160	-3.209	0.338
Demographic attributes										
Race (ref=white)	0.294	0.018	0.426	0.048	0.258	0.042	0.228	0.037	-0.218	0.038
Age	-0.115	0.004	0.019ns	0.011	-0.039	0.008	-0.001ns	0.007	-0.027	0.007
$Age^2(x10^{-2})$	-.124	0.004	-0.009ns	0.014	0.058	0.010	-0.002ns	0.009	0.028	0.009
Marital Status (ref=married)										
Previously Married	0.077	0.017	0.864	0.053	-0.275	0.038	0.086	0.037	0.161	0.036
Never Married	0.261	0.018	0.708	0.054	-0.065ns	0.039	-0.071ns	0.040	0.196	0.036
Education (ref=less than high school)										
High school	-0.588	0.016	-0.052ns	0.048	-0.253	0.036	-0.227	0.057	0.331	0.034
Some college	-0.806	0.021	-0.281	0.066	-0.453	0.047	-0.488	0.047	0.517	0.044
4 yrs college	-0.922	0.026	-0.198	0.083	-1.142	0.056	-0.364	0.059	1.021	0.053
5+ yrs college	-0.993	0.034	-0.413	0.125	-1.554	0.073	-0.659	0.086	1.632	0.067
Geographic attributes (ref=non-rim)										
Rim	0.089	0.014	-0.116	0.045	0.030ns	0.032	0.044ns	0.032	-0.037ns	0.030
Residence (ref=center city)										
Suburb	0.017ns	0.016	-0.201	0.047	0.057ns	0.035	0.084	0.037	-0.037ns	0.032
Not in MSA	0.224	0.017	-0.557	0.052	0.422	0.037	0.298	0.036	-0.512	0.035
Small MSA[b]	0.203	0.027	-0.411	0.085	0.234	0.061	0.222	0.033	-0.116	0.057
Intercept	1.196	0.069	-1.684	0.210	0.571	0.152	-1.470	0.148	0.561	0.140
-2 log-likelihood	6916.534		1235.969		3828.902		908.438		5852.092	
N	166,592		34,187		24,960		30,694		34,187	

[a] Models predict the likelihood of an individual experiencing underemployment, unemployment, earning low-wages, working part-time or being discouraged.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: ns=not significant, p>.05 Source: Table 3.2

protects women against hardship, but in this case, increasing age uniformly reduced the risk of underemployment.

Returns to experience for the underemployed population varied by sex and type of outcome. For men and women, as age increased, the likelihood of working for low-wages and being discouraged declined. The exception was for the oldest workers, who faced greater chances of working for low pay. However, a different pattern emerged in the unemployment model. As age increased, men were actually at greater risk of being unemployed.

Also consistent with my expectations, being married reduces the likelihood of experiencing marginal employment. For men and women, never married persons were more likely than those currently married to be underemployed and unemployed, and never married men were more likely to work part-time. The direction of the effect for being married in the past differs by sex in the low-wage model, however. Prior marriage history increases the chances that men work for low-wages, but reduces it for women. I return to this issue later in this chapter.

All other things equal, education decreased the likelihood of most forms of marginal employment. In some models, men benefitted most from a college degree, relative to less than high school, although in general, having at least some college reduced hardship for women and men. Surprisingly, education increased the likelihood that a person was discouraged. For example, women with at least a high school diploma were more likely to report being discouraged compared to women who had not completed high school. Among men, this positive effect appeared only for those who

had at least a college degree. These findings suggest that highly educated jobless people were less hopeful about finding work than their less educated counterparts.

To sum, my hypothesized relationships between demographic attributes and poor work outcomes described in Chapter 3 are largely supported. For example, in general, blacks were more likely to report hardship than whites, and education often protects against marginal employment. Interestingly, however, traditional human capital characteristics do not always provide the same advantages. In some instances, workers with the most experience reported lower odds of hardship, and at other times they were more likely to suffer poor work outcomes. There are some sex differences, notably in terms of marital status and low-quality work.

Prior research suggests that expansion of the service sector and the contraction and relocation of manufacturing industries resulted in more employment opportunities for many workers in western and southern coastal regions of the United States (Kasarda 1995, Frey 1995). Although the migration of jobs to rim states may reduce employment hardship in this region, it is also possible that workers in these same states actually experience increases in poor work outcomes through the proliferation of part-time and low paying positions. Results suggest that residents in rim regions were over 8 percent more likely to be underemployed than people outside this region.[1] Men in rim areas were also more likely to earn low-wages and work part-time than workers in the interior and northeastern United States, but they were less likely to be unemployed. Women in

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[1] I converted the coefficients for men (b=.078) and women (b=.089) into odds ratios, and then in this case interpreted it as a percent.

this region also posted higher chances of underemployment and lower chances of unemployment if they resided in rim states. The negative effect for unemployment suggests that industrial relocation and expansion of services in this region does provide job growth, whereas the positive coefficient for men earning low-wages and working part-time may also suggest that jobs in this region provide inadequate employment. Interestingly, the regional control had no affect on the chances of a woman earning low pay or working part-time.

As I mentioned in Chapter 3, I expected to find evidence of less hardship outside of center cities as a result of industrial drift (Hawley 1986, Kasarda 1989, Kain 1968). Estimates in Table 4.7 show this to be the case. Men living in the suburbs of MSAs were less likely to be underemployed and unemployed than those in center cities. Like men, women in the suburbs were less likely to be unemployed than their urban counterparts, but living in the suburbs increased their chances of part-time work.

Consistent with my expectations, men and women were more likely to be underemployed and earn low-wages when they lived outside of MSAs or in small MSAs. Women in largely nonurban areas were also significantly more likely to work part-time than their urban counterparts. However, the adverse effect of non-metro residence for men and women was offset by less unemployment and more optimism about work prospects than suburban and city residents. These findings offer support for my expectation, only very loosely tested here, that the proliferation of the service sector outside the city offered many marginal jobs, characterized by part-time employment, inadequate wages, or both.

To sum, persons living in rim regions, rural areas, and the suburbs, were protected from unemployment, but at greater risk of earning low pay or working part-time. Men and women were quite alike in terms of geographic determinants of hardship, with the exception being low-hour employment. Women living anywhere outside the center city were more likely to work part-time, while men did post any geographic variation for this outcome.

Although we have seen that certain forms of marginal employment have increased over time, and that demographic and geographic factors affect the outcomes, it is not apparent from these models how the likelihood of experiencing one type of hardship compare to the likelihood of experiencing another. Because my analysis is limited to post-recessionary periods, I expect that workers are more likely to experience low quality employment (low-wage and part-time work), rather than unemployment. To test this idea, I performed logistic regressions using a binary dependent variable that contrasts the log-odds of working part-time or earning low-wages, versus being unemployed. The chances of low quality work, versus unemployment, are predicted net of demographic and geographic controls.

Tables 4.9 and 4.10 present regression coefficients for men and women, respectively, and they suggest that low quality work is more common than unemployment. During all post-recessionary periods, men and women were more likely to work part-time than be unemployed, and men were more likely to work in low paying jobs. Therefore, relative to 1972, the chances that a man or woman worked in an

Table 4.9 Logistic regression estimates contrasting states of Marginal Employment, Men aged 18-64, 1971-93[a]

	Low Wages/ Unemployed		Low Hours/ Unemployed	
	b	SE	b	SE
Period (ref=1972)				
1978	0.345	0.034	0.213	0.037
1988	0.235	0.051	0.538	0.051
1992	0.468	0.186	1.277	0.164
Demographic attributes				
Race (ref=white)	-0.083ns	0.042	-0.124	0.045
Age	-0.133	0.009	-0.021	0.009
$Age^2(x10^{-2})$	0.002	0.011	-0.045	0.012
Marital Status (ref=married)				
Previously Married	-0.255	0.056	-0.107ns	0.054
Never Married	0.380	0.039	0.068ns	0.043
Education (ref=less than high school)				
High school	-0.021ns	0.036	-0.033ns	0.037
Some college	0.370	0.048	-0.095	0.054
4 yrs college	0.133	0.068	-0.267	0.076
5+ yrs college	0.771	0.082	-0.058ns	0.097
Geographic attributes (ref=non-rim)				
Rim	0.466	0.036	0.494	0.038
Residence (ref=center city)				
Suburb	0.265	0.040	0.234	0.042
Not in MSA	0.920	0.040	0.364	0.043
Small MSA[b]	0.561	0.065	0.277	0.069
Intercept	1.312	0.163	-0.657	0.175
-2 log-likelihood	1589.926		520.410	
N	20,711		23,071	

[a] Models predict the likelihood of an individual experiencing underemployment, unemployment, earning low wages, working part-time, and being discouraged.
[b] These MSAs are too small to be identified for confidentiality reasons.
Note: ns=not significant, p>.05
Source: Table 3.2

Table 4.10 Logistic regression estimates for contrasting states of Marginal Employment, Women aged 18-64, 1971-93[a]

	Low wages/ Unemployed		Low Hours/ Unemployed	
	b	SE	b	SE
Period (ref=1972)				
1978	0.610	0.049	0.254	0.053
1988	0.036ns	0.070	0.548	0.071
1992	-0.275ns	0.267	0.903	0.249
Demographic attributes				
Race (ref=white)	-0.398	0.053	-0.137	0.057
Age	-0.004ns	0.012	0.014ns	0.013
$Age^2(x10^{-2})$	0.037	0.016	0.011ns	0.016
Marital Status (ref=married)				
Previously Married	-0.919	0.056	-0.137	0.057
Never Married	-0.703	0.059	-0.736	0.060
Education (ref=less than high school)				
High school	-0.107	0.052	-0.110	0.056
Some college	0.082ns	0.071	-0.114ns	0.077
4 yrs college	-0.372	0.089	-0.094ns	0.098
5+ yrs college	-0.392	0.135	-0.127ns	0.148
Geographic attributes (ref=non-rim)				
Rim	0.125	0.048	0.108	0.053
Residence (ref=center city)				
Suburb	0.179	0.051	0.263	0.056
Not in MSA	0.705	0.056	0.749	0.061
Small MSA[b]	0.471	0.090	0.560	0.097
Intercept	1.434	0.227	0.125ns	0.242
-2 log-likelihood	1350.613		857.644	
N	19,945		15,875	

[a] Models predict the likelihood of an individual experiencing underemployment, unemployment, earning low-wages, working part time, or being discouraged.

[b] These MSAs are too small to be identified for confidentiality reasons.

Note: ns=not significant, p>.05

Source: Table 3.2

marginal job that provided only part-time employment increased by 1992 (compared to being unemployed).

Because low wage and part-time work are common characteristics of much of the new job growth, I expected that these outcomes are more likely in areas with more job growth, such as outlying, rural, and rim regions. Point estimates support this hypothesis. The chances of working part time or earning low wages, compared to being unemployed, were higher in rim states and in areas outside the center city. For example, men in the western and southern coastal region were more likely to earn low-pay or work part-time, than to be unemployed. In general, men and women in these localities were also more likely to be discouraged about finding work than to be unemployed. Again, these findings suggest that although job growth during recoveries reduced unemployment, many available positions provided only marginal (low-wage or part-time) employment.

To sum, patterns in Tables 4.9 and 4.10 show that low quality-work, as opposed to unemployment, was more common by the early 1990s. Although the likelihood of being underemployed, in general, changed very little from 1971 to 1993, opposing patterns in the four forms of hardship explain this effect. From separate examinations of each poor work outcome, there is evidence that three of the four forms of hardship actually increased by the early 1990s for women and men. Finally, the findings suggest the importance of demographic and geographic attributes in influencing employment outcomes.

Conclusions

The purpose of this chapter was to assess 1) whether marginal employment increased over time; 2) whether employment hardship varied by sex; and 3) how demographic and geographic characteristics influence poor work outcomes. The findings presented in this chapter answer these questions. First, relative to 1972, marginal employment was more likely by the early 1990s. Second, although **patterns** of marginal employment were often similar for women and men (with the exception of low-wage work), the **effects** of covariates of hardship often differed by sex. Finally, demographic and geographic variables also influenced poor work outcomes, generally in the expected directions.

Chapter 5

Labor Market Factors and Marginal Employment

Findings in Chapter 4 suggest that men and women are alike in their chances of experiencing marginal employment by the early 1990s, but differ with respect to the effects of demographic and geographic characteristics. Therefore, individual qualities, including residential characteristics expected to represent some aspect of the availability of jobs, affect men and women's poor work outcomes, with some interesting sex differences. However, I still have not examined how labor market qualities influence hardship, and if these factors vary by sex.

In this chapter, I use data from the Census and CPS files to examine the effects of labor market conditions on determinants of marginal employment in circa 1992. I estimate separate models for men and women, and predict the odds of experiencing employment hardship net of individual level factors and contextual effects. These models shows how conditions in labor markets, following an extensive period of economic turbulence and industrial change, influence relationships on the individual level. The findings allow me to say how context enhances or exacerbates the effect of sex, with respect to poor work outcomes.

Data and Measures

For this analysis, I use data that capture the final post-recessionary period, 1991-1993, to measure individual attributes and employment hardship. Because this analysis examines contextual effects within and across labor markets, I also use data from the

Census Summary Tape Files 3A and 4A (U.S. Bureau of the Census 1992). I define a U.S. labor market as a metropolitan statistical area (MSA).[1] As described earlier, the number of MSAs included across years of the CPS changed due to definitional issues and the relaxation of privacy constraints. Therefore, I restrict my analysis to large MSAs because their boundaries changed very little, if at all. I examined cell size for each independent variable, and used reliability diagnostics, to select MSAs with enough persons to reliably predict individual level relationships. These qualifications yielded a final sample of 104 MSAs for the 1991-93 period.[2]

To avoid any further reduction in sample size, I used a restricted set of predictors to estimate hardship. Descriptive statistics for individual level variables and MSA covariates are shown in Table 5.1. Sex and age are specified as they appeared in earlier in this dissertation, but race and ethnicity differs. In this analysis, I use an indicator variable for minority status, which includes blacks, Latinos, and Native Americans.[3] In this case, 1 equals minority status, and whites and Asians are the referent. I measure education in years completed (by collapsing the series of educational dummies into one continuous variable) and industrial location with a binary measure for service sector, where 1 equals the four types of service industries (the higher skilled social and

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[1] Research suggests that boundaries based on commuting patterns, referred to as local labor market areas, are more applicable for answering work-related questions (Killian & Tolbert 1993). However, the CPS does not provide the data necessary to utilize this geography.

[2] The MSAs are listed in Appendix C.

[3] A black/nonblack distinction is preferable, but would result in losing additional cases.

Table 5.1 Descriptive Statistics for Contextual and Individual-level variables, 1990-93.

Contextual Variables	Descriptive Statistics	
	Mean	Standard Deviation
Index of Dissimilarity for Occupations	50.24	3.39
Percent employed in Service Industries	32.53	4.60
Percent employed in Personal Services	6.00	4.31
Percent employed in Manufacturing	10.83	4.87
Percent with High School diploma	30.24	4.87
Percent of households receding aid	7.08	2.52
Log Working Population	13.03	2.69
Log Percent Black	- 2.45	1.02
Individual Level Variables		
Female	0.41	0.49
Minority	0.08	0.28
Age	38.63	11.21
Education	8.55	1.67
Service Industry	0.68	0.47

Source: 1991-93 Current Population Survey, Annual Demographic Files
1990 U.S. Census Summary Tape Files 3A, 4A

producer services, transformative services, and lower skilled personal services). The referent is manufacturing and extractive industries. All individual level predictors are grand mean centered. Because the analysis consists of two levels and takes into account the context of the individual's labor market, I rely on labor market measures of industrial structure available from Summary Tape File 3A (U. S. Census 1992). For example, I include area levels of manufacturing to address labor market context for the whole sample and also in the models for men. On average, manufacturing accounted for about 11 percent of the industries across the MSAs (see Table 5.1).

Because few women are employed in the manufacturing sector, in models estimated for women I use percent service industries. I reason that manufacturing and services are somewhat analogous for men and women. To capture low-skill service positions filled by many women, I also include a measure of personal services. Table 5.1 show the service sector composed approximately one-third of metro area industries, and personal services accounted for 6 percent.

To gauge the amount of opportunity for women in the labor market, I measure their occupational distributions relative to men in each MSA. This involved aggregating county-level summaries of men and women within 92 occupational categories to the MSA level, and then computing an occupational index of dissimilarity for men and women within each MSA. The index ranges from 0 to 100, with a score of 0 meaning perfect integration, or the same share of women and men distributed throughout occupations, and a score of 100 indicating complete separation of women and men in

terms of work (Shyrock and Siegal 1976, Reskin and Roos 1992).[4] On average, about half the women would have to change jobs to achieve perfect integration with men.

I also control for area living standards and skill levels. Percent of persons receiving public assistance (about 7 percent, on average) taps the quality of life, and the percent of persons with only a high school diploma broadly measures labor market skill. Finally, I control for the size of the MSA population (logged).

Whereas in Chapter 4 I examined marginal employment states for the whole sample and the underemployed, in this analysis I predict the same outcomes for the entire sample of persons in 104 MSAs in 1991-1993.[5] My main expectation is that industrial sector affects area levels of hardship and conditions experiences for men and women. Persons in areas with higher levels of manufacturing will report less hardship, at least in terms of low wage work, and women in areas with high levels of services will be less likely to experience poor work outcomes. However, as percent of personal services in these markets increases, I expect that women will face higher odds of poor

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[4] The index of dissimilarity , I.D., is defined as

$$I.D. = \frac{1}{2} \sum_{i=1}^{n} |x_i - y_i|^*$$

where x_i= the percentage of one group (e.g., women) in the ith category of a classification (e.g., a particular occupation, and y_i= the percentage of the other group (e.g., men) in that same category (Duncan and Duncan 1955, Reskin and Hartmann, 1986).

[5] Small sample size does not allow for consideration of contextual factors for only the underemployed population.

work outcomes related to the low quality of employment in this sector. Net of these salient factors, women in areas with a more integrated occupational system (i.e. a lower index of dissimilarity) will also report lower levels of employment hardship.

Methods

To address the effects of local labor markets on individual outcomes, I employ a hierarchical logistics regression modeling technique using HLM software (Bryk, Raudenbush & Congdon 1994, 1996). Although earlier research designed to elaborate on traditional human capital models often attached market-level qualities to persons, the practice violated an assumption underlying regression analysis, that is, observations and errors are statistically independent. For example, in an analysis of individuals in labor markets, the area industrial composition will not vary across individuals, which means the observations and errors associated with them are not independent (Tolbert & Beggs 1996). Hierarchical regression analysis explicitly addresses the correlation among error terms by using a nested series of models, each with its own error term (Roundtree & Land 1996). Two or more nested models then rely on either maximum likelihood techniques (for linear regression models) and quasi-maximum likelihood techniques (for nonlinear equations, Bryk, Raudenbush & Congdon 1996). With the method, therefore, I obtain reliable standard errors to identify the process in which individual qualities and contextual factors contribute to overall variation in employment hardship.

Given the data, measures, and methods described above, I specify the individual-level model predicting employment hardship for individual$_i$ in MSA$_j$ as:

$$_o(UE)_{ij} = \beta_j + \beta_{1_j}(Age_{ij}) + \beta_{2_j}(Sex_{ij}) + \beta_{3_j}(Minority_{ij}) + \beta_{4_j}(Education_{ij}) + \beta_{5_j}(Service_{ij}) + r \quad \textbf{(1)}$$

where

Ue_i equal 1 if the individual is in one of the employment states in question, (0 if not); Age_{ij} equals the age of individual$_i$ in MSA$_j$, Sex_{ij} equals 1 if individual$_i$ in MSA$_j$ is female (0 if not); $Minority_{ij}$ equals 1 if individual$_i$ in MSA$_j$ is minority (0 if not); $Education_{ij}$ equals the highest grade of schooling completed for individual$_i$ in MSA$_j$; and $Service_{ij}$ equals 1 if individual$_i$ in MSA$_j$ is employed in the service sector (0 if not). In this individual-level model, B_j represents the average MSA level of hardship, and r_{ij} is the error term associated with individual$_i$ in MSA$_j$.

I began the analysis with the assumption was that all model coefficients varied by metropolitan area. When this was not the case, coefficients were then fixed; in other words they were not allowed to vary for the second-level analysis.[6] In this manner, I estimated random-coefficient regression models for each form of hardship for the entire sample, and for men and women separately. In these models, the intercept and the randomly varying slope coefficients take the following forms:

$$\beta_{0_j} = \gamma_{00} + \mu_{0_j} \quad \textbf{(1a)}$$

[6] Second-level variables were fixed when their random effect was not significant at $p > .5$.

where B_{0j} is the average level of hardship within the MSA and μ_{0j} is the error associated with the *j*th MSA and,

$$\beta_{2_j} = \gamma_{20} + \mu_{2_j} \quad \textbf{(1b)}$$

where B_{2j} is the average female-employment hardship slope across MSAs and μ_{2j} is the error associated with the slope for the *j*th MSA.

Since I expect that many coefficients vary significantly across metropolitan areas, I next estimate models in which labor market correlates of employment hardship are included to account for variability in returns to demographic attributes. The full contextual model for the entire sample includes variables expected to affect average area levels of hardship, the intercept in this case

$$\beta_{0_j} = \gamma_{00} + \gamma_{01}(HS_j) + \gamma_{02}(Pop_j) + \gamma_{03}(Aid_j) + \gamma_{04}(Manf_j) + \mu_{0_j} \quad \textbf{(2)}$$

and also factors expected to differentially influence women's employment outcomes, the slope coefficient.

$$\beta_{2_j} = \gamma_{20} + \gamma_{21}(HS_j) + \gamma_{22}(Pop_j) + \gamma_{23}(Aid_j) + \gamma_{24}(ID_j) + \gamma_{25}(services_j) + \mu_{2_j} \quad \textbf{(3)}$$

At the second level, market factors such as percent employed in manufacturing or services and levels of occupational sex segregation are expected to affect average area levels of hardship and also exacerbate women's employment hardship, or influence the return to sex for states of marginal employment. Then I estimate models separately by

sex. The equations for men and women are similar in form, but in these cases, I predict average labor market hardship (or the intercept, B_{0j}). Each model is estimated first for underemployment and then for three forms of hardship: unemployment, low wage, and part time work.[7]

Findings

Table 5.2 presents individual-level outcomes as part of a random coefficient model. The fixed effect panel of Table 5.2 indicates that nearly all of the individual level predictors are significantly related to employment hardship. Although analysis refers only to persons living within the 104 MSAs, in general the effects remained consistent with findings reported in chapter 4.

Interestingly, coefficients for being female suggests differences between men and women. In Table 5.2, coefficients in the fixed effect panel show that women were just as likely as men to experience underemployment and unemployment, but they had significantly higher odds of earning low wages. This may be due to women's employment in service sector industries. Current research also suggests this interpretation. For example, women earn at best 75 percent of mens pay (Bernhardt, Morris and Handcock 1995, Morris, Bernhardt and Handcock 1994, Goldin 1990) and more often work in lower paying service positions (Reskin and Roos 1990, England 1990). In addition, women were less likely than men to work part-time, involuntarily.

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[7] Because preliminary analysis showed that area factors are unrelated to discouraged workers, I do not include these models in the following analyses.

Table 5.2 Random coefficient regression model for logistic regression coefficients predicting Marginal Employment, Men and Women aged 18-64, 1991-93

Fixed Effect	Underemployment		Unemployment		Low Wages		Low Hours	
	b	SE	b	SE	b	SE	b	SE
Mean hardship (G00)	-1.627*	0.037	-5.416*	0.602	-2.442*	0.047	-2.589*	0.048
Female (G10)	-0.036	0.047	-1.343	2.012	0.238*	0.057	-0.152*	0.058
Age (G20)	-0.045*	0.002	-0.040*	0.004	-0.057*	0.003	-0.037*	0.002
Minority (G30)	0.355*	0.049	0.391*	0.088	0.443*	0.065	0.223*	0.073
Education (G40)	-0.289*	0.011	-0.203*	0.019	-0.307*	0.012	-0.231*	0.012
Services (G50)	-0.134*	0.046	-0.473*	0.072	0.377*	0.063	-0.347*	0.052
Random Effect	Variance component		Variance component		Variance component		Variance component	
Intercept (U0)	0.095*		0.137*		0.141*		0.140*	
female (U1)	0.071*		0.079		0.096*		0.052	
age (U2)	0.0001*		0.0006*		0.0005*		0.00003	
minority (U3)	0.043		0.061		0.104*		0.136*	
education (U4)	0.003*		0.006		fixed		fixed	
service industry (U5)	0.203*		fixed		0.284*		fixed	

* significant at p<.05, two tailed test. [a] significant at p<.05, one tailed test.
Source: Table 5.1

As expected, age and education both reduced employment hardship. Like the patterns reported in chapter 4, skill remained an important protection against poor work outcomes. Also consistent with earlier findings, minorities were more likely than whites and Asians to experience employment hardship. In fact, minorities had about 55 percent higher odds ($e^{0.443}$) of earning low wages than majority persons.

Industrial location also affected employment hardship. Compared to workers in manufacturing industries, those in services were less likely to be underemployed, unemployed, or working part-time. Persons employed in manufacturing were more likely to be unemployed than those working in the service sector. It may be that the expansion of service industries provided ample work opportunities at the same time that the volatility in the manufacturing sector resulted in tenuous employment. Consistent with the literature on service employment, persons in these jobs were more likely to earn low pay, relative to those in manufacturing. In fact, net of other predictors, persons in such industries had about 46 percent higher odds ($e^{0.377}$) of working for low wages.

Although the findings for random effects were by no means conclusive, I found that average levels of hardship varied significantly across MSAs, and with this evidence, I then further examined contextual effects. For example, returns to age or experience varied over labor markets for three of the four outcomes. In addition, I found similar patterns of random effects for the female and service coefficients. Both varied across MSAs when the outcome of interest was underemployment (column 1) or low wage work (column 2). In general, models for the first two forms of hardship were similar in terms of random effects, whereas those predicting part-time work (column 3)

and unemployment (column 4) suggested less variation across MSAs in terms of demographic attributes.

Tables 5.3 and 5.4 present separate random coefficient models for men and women, respectively. By and large, the individual level effects reinforced the patterns of relationships shown in Table 5.2. One notable difference was that women in service industries were more likely to be underemployed than those in manufacturing and extractive sectors (see column 1, Table 5.4). On the other hand, men in service industries were protected from this form of hardship. This finding may be related to the fact that the manufacturing sector employs primarily men, and restructuring hurt these workers more than it did men in service industries. Likewise, although women traditionally work in lower quality service sector jobs, but those that found employment in manufacturing received benefits that include a more lucrative pay structure. Another interesting change from findings in Chapter 4 is that there was no difference between minority and white women in chances of part time work. In all other cases, minorities were more likely to experience poor work outcomes.

Like Table 5.2, the random effect panels of these tables show that the average level of hardship (U0) varied across MSAs. The one exception was in Table 5.4, for women's unemployment (column 4). In this case, none of the individual level measures included in these models varied across metro areas, that is, both average unemployment and the effects of demographic variables I used to predict hardship were uniform across MSAs. In general, I found more variation in demographic characteristics across MSAs for men (Table 5.3) than for women (Table 5.4). In Table 5.4, the average level of

Table 5.3 Random coefficient regression models for logistic regression coefficients predicting Marginal Employment, Men aged 18-64, 1991-93

Fixed Effect	Underemployment		Unemployment		Low Wages		Low Hours	
	b	SE	b	SE	b	SE	b	SE
Mean hardship (G00)	-1.597*	0.041	-3.155*	0.063	-2.611*	0.058	-2.510*	0.054
Age (G10)	-0.049*	0.003	-0.041*	0.005	-0.065*	0.005	-0.044*	0.003
Minority (G20)	0.400*	0.057	0.367*	0.105	0.554*	0.083	0.281*	0.075
Education (G30)	-0.278*	0.015	-0.225*	0.021	-0.277*	0.015	-0.226*	0.017
Service industry (G40)	-0.253*	0.054	-0.499*	0.084	0.251*	0.073	-0.426*	0.063

Random Effect	Variance component	Variance component	Variance component	Variance component
Intercept (U0)	0.089*	0.150*	0.169*	0.149*
age (U1)	0.0002*	0.0007*	0.0009*	0.0006*
minority (U2)	fixed	0.138	0.112	fixed
education (U3)	0.005*	0.007*	fixed	0.005*
service industry (U4)	0.047*	0.048	0.085	fixed

* significant at $p<.05$, two tailed

Source: Table 5.1

Table 5.4 Random coefficient regression models for logistic regression coefficients predicting Marginal Employment, Women aged 18-64, 1991-1993

Fixed Effect	Underemployment		Unemployment		Low Wages		Low Hours	
	b	SE	b	SE	b	SE	b	SE
Mean hardship (G00)	-1.684*	0.047	-3.953*	0.077	-2.272*	0.058	-2.714*	0.060
Age (G10)	-0.039*	0.003	-0.036*	0.008	-0.048*	0.004	-0.026*	0.004
Minority (G20)	0.304*	0.067	0.443*	0.162	0.353*	0.091	0.184	0.094
Education (G30)	-0.308*	0.017	-0.105*	0.040	-0.360*	0.019	-0.247*	0.021
Service industry (G40)	0.125*	0.073	-0.406*	0.165	0.614*	0.104	-0.159	0.099

Random Effect	Variance component	Variance component	Variance component	Variance component
Intercept (U0)	0.129*	0.032	0.421*	0.150*
age (U1)	0.0002*	0.0009	0.0006*	fixed
minority (U2)	0.146	0.134	0.160	0.013
education (U3)	fixed	fixed	fixed	fixed
service industry (U4)	fixed	fixed	0.070	fixed

* significant at $p<.05$, two tailed
Source: Table 5.1

hardship varied for three outcomes, and the effect of age varied for two types of hardship: underemployment and low wage work.

Because there was clearly variation in the average levels of employment hardship across the 104 MSAs (see the random effects panels of Tables 5.2, 5.3, 5.4), the next step includes the contextual variables expected to affect mean hardship. Because the returns to being female (see the random coefficient panel, Table 5.2) varied for two forms of hardship across MSAs, I also specified area level factors that condition this relationship. Table 5.5 presents the full multi-level model for all persons, and Tables 5.6 and 5.7 present separate models for men and women. In the latter case, I only specify contextual affects for the intercept, because as I just mentioned, for women, most of the other individual level slopes did not vary across MSAs (see random effects panel, Table 5.4).

Table 5.5 presents the individual level slope coefficients (in bold) and the effect of the contextual measures on the average level of hardship (G00) and on the female slope (G10). The random effects portion of the model showed that there was still significant variation in average level of employment hardship across areas. This suggests that, the contextual measures I used in this case do not account all for of the variation across labor markets.

In fact, I only found significant effects for a handful of coefficients. Level of public assistance and population make up most of these effects. For three of the four forms of employment hardship, I found that higher area levels of public assistance heightened the risk of poor work outcomes. Also, larger population size appeared to

Table 5.5 Estimated effects of MSA Characteristics on logistic regression coefficients predicting Marginal Employment, Men and Women aged 18-64, 1991-93

Fixed Effect	Underemployment		Unemployment		Low Wages		Low Hours	
	b	SE	b	SE	b	SE	b	SE
Mean hardship (G00)	-1.612*	0.412	-5.416*	0.602	-1.660*	0.447	-3.054*	0.558
% high school	-0.001	0.007	0.018	0.012	-0.012	0.008	0.007	0.010
% manufacturing	0.003	0.007	-0.003	0.011	-0.010	0.008	0.023*	0.010
%public assistance	0.060*	0.014	0.066*	0.022	0.076*	0.015	0.031	0.019
lg population	-0.030	0.021	0.071*	0.030	-0.065*	0.024	-0.017	0.029
Female (G10)	-0.230	1.087	-1.343	2.012	0.156	1.368	-0.435	1.409
% high school	-0.017	0.012	-0.015	0.025	-0.017	0.015	-0.005	0.015
%public assistance	-0.014	0.022	-0.066	0.046	0.004	0.027	-0.045	0.029
lg population	-0.054	0.028	0.052	0.051	-0.075*	0.037	-0.034	0.037
dissimilarity	*0.047**	*0.019*	*0.010*	*0.035*	*0.051**	*0.024*	*0.045**	*0.025*
%service industries	-0.026*	0.012	0.009	0.012	-0.031*	0.014	-0.032*	0.014
Age (G20)	-0.045*	0.002	-0.040*	0.004	-0.057*	0.004	-0.037*	0.002
Minority (G30)	0.361*	0.049	0.391*	0.088	0.459*	0.065	0.222*	0.071
Education (G40)	-0.290*	0.011	-0.203*	0.019	-0.308*	0.012	-0.229*	0.014
Services (G50)	-0.137*	0.046	-0.473*	0.072	0.373	0.064	-0.346	0.053
Random Effect	Variance component		Variance component		Variance component		Variance component	
Intercept (U0)	0.077*		0.137*		0.073*		0.129*	
female (U1)	0.040		0.079		0.062*		0.022	
age (U2)	0.0001*		0.0006*		0.0004*		0.00003	
minority (U3)	0.045		0.061		0.106*		0.117*	
education (U4)	0.002*		0.006		fixed		0.002	
service industry (U5)	0.041*		fixed		0.934*		fixed	

* significant at p<.05, two tailed test. * significant at p<.05, one tailed test.

Source: Table 5.1

provide protection against low wage work, but it increased the chances of unemployment. In contrast to my expectations, area levels of manufacturing actually increased average levels of part time work.

Two contextual measures conditioned women's employment experiences. Area levels of service industries and occupational sex segregation both significantly influenced the female slope coefficient. For underemployment, low wage, and part time work, MSA levels of services reduced the relationship between sex and hardship. In other words, women in these MSAs were less likely to report hardship than female residents in labor markets with lower levels of service industries. Also, occupational sex segregation in the labor market had a positive effect on poor work outcomes for women. Higher levels of sex segregation, or a more closed occupational structure, exacerbated the risk of women experiencing underemployment, low wage, and part time work.

Tables 5.6 and 5.7 present main and contextual effects for models separated by sex. Contextual factors presented in random effects panel in Table 5.6 suggest that both average area level of hardship and the conditioning effect of age vary across MSAs for all forms of employment hardship. Additionally, the influence of education also differs across areas. The contextual effect of minority status and employment in service industries was uniform throughout the 104 markets.

The individual level effects and the influence of contextual factors on these processes are described in the top panel of Table 5.6. In general, like in Table 5.3, age, education, and employment in service sector all decreased the likelihood that a man suffered employment hardship. In fact, men employed in services still had a 60 percent

Table 5.6 Estimated effects of MSA Characteristics on logistic regression coefficients predicting Marginal Employment, Men aged 18-64, 1991-93

Fixed Effect	Underemployment		Unemployment		Low Wages		Low Hours	
	b	SE	b	SE	b	SE	b	SE
Mean hardship (G00)	-1.708*	0.694	-5.721*	0.916	-1.826*	0.817	-3.053*	0.942
% high school	-0.003	0.010	0.009	0.013	-0.014	0.012	0.0001	0.013
% public assistance	0.053*	0.019	0.074*	0.024	0.059*	0.021	0.033	0.025
lg population	-0.018	0.024	0.038	0.029	-0.044	0.028	-0.008	0.032
dissimilarity	0.004	0.016	0.026	0.020	0.002	0.018	0.006	0.021
%manufacturing	-0.012	0.008	-0.003	0.011	-0.026*	0.009	0.009	0.011
Age (G10)	-0.049*	0.003	-0.041*	0.004	-0.065*	0.005	-0.044*	0.003
Minority (G20)	0.397*	0.062	0.384*	0.105	0.550*	0.073	0.280*	0.075
Education (G30)	-0.278*	0.015	-0.227*	0.021	-0.275*	0.015	-0.226*	0.017
Service industry (G40)	-0.253*	0.054	-0.497*	0.084	0.259*	0.070	-0.426*	0.063
Random Effect	Variance component		Variance component		Variance component		Variance component	
Intercept (U0)	0.076*		0.126*		0.090*		0.152*	
age (U1)	0.0002*		0.0007*		0.0009*		0.0006*	
minority (U2)	0.044		0.140		fixed		fixed	
education (U3)	0.005*		0.007*		fixed		0.005*	
service industry (U4)	0.048		0.031		0.044		fixed	

* significant at p<.05, two tailed

Source: Table 5.1

Table 5.7 Estimated effects of MSA Characteristics on logistic regression coefficients predicting Marginal Employment, Women aged 18-64, 1991-1993

Fixed Effect	Underemployment		Unemployment		Low Wages		Low Hours	
	b	SE	b	SE	b	SE	b	SE
Mean hardship (G00)	-3.893*	0.802	-6.632*	1.145	-4.034*	0.890	-5.613*	1.105
% high school	-0.009	0.011	-0.020	0.022	-0.019	0.012	0.010	0.015
% public assistance	0.034	0.020	-0.035	0.042	0.061*	0.021	-0.027	0.029
lg population	-0.057*	0.026	0.101*	0.042	-0.100*	0.030	-0.031	0.036
dissimilarity	0.056*	0.017	0.042ª	0.032	0.060*	0.019	0.061*	0.023
%personal services	0.034	0.009	0.009	0.018	0.038*	0.009	0.028*	0.012
Age (G10)	-0.040*	0.003	-0.036*	0.008	-0.048*	0.004	-0.025*	0.004
Minority (G20)	0.307*	0.068	0.433*	0.162	0.354*	0.091	0.177	0.094
Education (G30)	-0.310*	0.017	-0.107*	0.041	-0.361*	0.019	-0.249*	0.021
Service industry (G40)	0.165*	0.081	-0.410*	0.165	0.617*	0.105	-0.155	0.099
Random Effect	Variance component		Variance component		Variance component		Variance component	
Intercept (U0)	0.073*		0.047		0.054*		0.107*	
age (U1)	0.0002*		0.0008		0.0006*		0.00008	
minority (U2)	0.027		0.134		0.162		0.007	
education (U3)	fixed		fixed		fixed		fixed	
service industry (U4)	0.077		fixed		0.083		fixed	

*significant at p<.05, two tailed test

ªsignificant at p <.05, one tailed test

Source: Table 5.1

lower odds ($e^{-0.497}$) of being unemployed than those in manufacturing, however, the chances of earning low wages rose when men worked in service industries. Also consistent with earlier findings, men of color were more likely to experience poor work outcomes. This was most severe in the model predicting low wage work, where minority men were 73 percent ($e^{0.550}$) more likely than whites to report hardship.

As I stated earlier, in the models for men and women, I specify the contextual factors that I expect condition average area levels of hardship (the intercept, G00). In addition to the MSA-level measures used in Table 5.5, because I found that women experienced poorer work outcomes in areas with more segregated occupational structures, in Table 5.6 I included the index of dissimilarity to examine if men's average level of hardship was related to levels of sex segregation.

On the whole, contextual factors had little relationship to average area levels of employment hardship, however, area levels of public assistance exacerbate poor work outcomes. Percent of manufacturing in an area influenced average levels of low wage work. In this instance, higher percentages of manufacturing industries reduced mean levels of this form of hardship. Occupational sex-segregation did not affect average area marginal employment. In other words, men were equally well-off in terms of average labor market hardship, irrespective of levels of sex-segregation.

Although individual level variables were important for predicting hardship, in the random effect panel, only age and mean level of hardship varied across MSAs. In other words, although the contextual effects specified do condition average levels of

hardship, as I discuss in the following paragraphs, variation still exists across labor markets.

Unlike men, sex segregated occupational structures and amounts of personal services influence mean levels of female hardship (see Table 5.7).[8] The index of dissimilarity for occupations exacerbated mean levels of hardship, and percent of personal services in an MSA was also positively related to underemployment, low wage, and part-time work. In other words, on average, women's poor work outcomes increased in labor markets with a closed occupational structure and higher levels of personal services.

Conclusions

To sum, although women and men were often similar in terms of poor work outcomes, and women were less likely to work part-time by the early 1990s, contextual factors worked to the disadvantage of women, but did not substantially affect men's employment hardship. Earlier findings suggested that women and men both experienced increases in marginal employment, and although the effect of period was different by sex in circa 1978 and 1988, by the final time period, men and women were comparable in the effect of period on marginal employment. Despite this, the analyses presented in this chapter show that women are disadvantaged (especially in terms of low quality jobs) when they work in a sex-segregated labor market.

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[8] Area levels of manufacturing did not affect women's outcomes. As I mentioned earlier, I use personal services to capture areas where females were employed.

Chapter 6

Discussion and Conclusions

My dissertation addresses issues that seem incongruent during the current economic expansion: the quality of some jobs in the United States since 1970 has been declining, and certain parts of the labor force are facing increasingly dismal employment prospects. Specifically, I examine whether marginal employment, or low quality work, has increased since 1970 during periods of economic recovery, and what factors affect this process.

Over the past 28 years, two major factors have affected work outcomes. First, the focus of the U.S. economy has shifted from goods production to service production, and at the same time there was a unilateral change in technology with the microchip revolution and a general industrial move from manufacturing to services (Singelmann 1975, Colclough and Tolbert 1992, Tilly 1996). In addition, recent demographic trends show that women and men are becoming more alike in terms of educational attainment, and women are participating in the labor force in record numbers (Bianchi 1995, Mare 1995, Farley 1996). The analyses presented in this dissertation addresse these changes, compare men and women's poor work outcomes, and examine whether the determinants of hardship vary by sex. It combines individual level outcomes and labor market factors to provide the most thorough examination, to date, about the changes in marginal employment, the factors affecting marginal work outcomes, and how both differ for men and women.

Findings support my expectations regarding the growth of marginal employment. In general, marginal employment rose during periods of economic recovery from 1972 to 1992. Persons were more likely to experience unemployment and work part-time, and men were more likely to earn low-pay, by the early 1990s.

Marginal employment is not a recent phenomenon, limited to the post-industrialized labor market (see the dual labor market literature, especially Beck, Horan, and Tolbert 1980, Piore 1975). In addition, such work outcomes are expected during economic downturns, but not anticipated when the GDP is growing and unemployment is low. In light of this, I argue that changes since 1970 have resulted in a permanent sector of marginal jobs that persists despite improvements in the U.S. economy. Whether in an effort to maximize profit for share-holders, to remain competitive in the global economy, or to keep up to speed with technology, corporations are accepting temporary, contingent, part-time, and low-paid workers as "business as usual." In other words, over the past 28 years, U.S. labor markets have witnessed a structural shift in employment that resulted in an expansion of involuntary part-time and low-wage jobs. I argue that this development represents the institutionalization of marginal employment. One outcome of this shift is an increasing number of workers with weak ties to the labor market.

The relative indifference of policy makers to this permanent sector of low-quality jobs is distressing (Reich 1997). Since the mid-1990s, the U.S. economy has been strong and unemployment and interest rates low. These trends are less positive when contrasted with the low level of productivity and the proliferation of inadequate

employment (Uchitelle 1998, Tilly 1996). Findings from this dissertation show that we should be concerned because people are now more likely to work in low quality jobs, versus being unemployed.

The share of marginally employed persons has increased since 1970. Men and women are now both more likely to be unemployed and employed part time, and the chances of a man earning low pay have increased, relative to the early 1970s, while women's odds remain unchanged. Additionally, men are more likely to earn low pay than be unemployed, and both sexes are more likely to work part-time than to be unemployed.

The different experiences of men and women in regard to low-quality jobs, versus unemployment, and marginal employment in general, are important. Findings show that women are still more likely than men to be work in poorly paying jobs. However, evidence suggests that within the underemployed population, women's low-wage work has remained static (see Chapter 4), and that over the past 22 years, men have become increasingly likely to be employed in such positions. Therefore, one possible outcome of the bifurcation of the service sector, especially the growth in lower skilled services, is that men, primarily those with less schooling, are increasingly susceptible to the low-paying jobs traditionally held by women and minority workers.

The effect of demographic and geographic characteristics on employment hardship is the second issue addressed in this dissertation. Traditional measures of human capital, such as education and experience, coupled with race and marital status, provide men and women with protection against marginal employment, although the

relative strength of these effects often varies by sex. White married persons with more education and experience are better off than blacks, singles, and those with less education and experience, with respect to employment hardship. The rise in schooling since 1970 is particularly salient in light of my findings, because education is an important form of insurance against low quality work. However, findings presented in Chapter 4 suggest that workers need more than years of schooling to ensure adequate employment. Recent research suggests that specific, specialized training is increasingly necessary to remain competitive in an economy oriented to provision of services (Smith 1998, Colclough and Tolbert 1992).

Another demographic trend over the past 30 years, the decrease in marriage and concomitant rise in female labor force participation, is particularly interesting when compared with patterns reported in this dissertation. Although being married lowers the chances of marginal employment, this is more often the case for men than women. Furthermore, when both sexes receive a benefit from marriage, the coefficients are stronger for men than women, and the effects are significantly different across the models.

This suggests that the well-documented, positive effect of marriage on employment is present for men, but is not necessarily consistent for women. In fact, never and presently married women are equally likely to be employed in a low-quality job. These findings may suggest that the appeal of marriage for employers, and the notion that it serves as a stabilizing influence and encourages "company-minded" employees, does not extend to married women. In addition, findings suggest that

previously married women experience better outcomes than their married counterparts. One possibility is that employers continue to view the wage-work of married women as less important than, or subordinate to, their husband's jobs, and consequently do not see women's marital status as ensuring stability but instead indicative of a weaker commitment to their job and career. Alternatively, another interpretation suggests that married men and formerly married women, or the main breadwinners within a family, are more selective about employment and avoid marginal work if at all possible.

Geographic attributes, or the region of the country where a person lives and his or her residential status relative to a large center city, are also related to marginal employment. Although the term "Rustbelt" has become popular for characterizing the deteriorating manufacturing centers in the Midwest and Northeast, I use an alternative regional measure of Western and Southern coastal states, chosen to highlight the growth of jobs and especially diversified economies (Frey 1995).

Findings in Chapter 4 suggest that persons living in this region, known as the rim, experience less unemployment but men in this area are more likely to report part-time and low-wage work. Interestingly, women living in the rim are just as likely as those living in non-rim states to report these forms of marginal employment. This could be a result of women's widespread employment in service industries, and their concentration in the rapidly expanding, lower-skilled service sector. These positions are increasingly important for less educated and lower skilled men, as better jobs in manufacturing have become scarce.

Another important residential distinction is center city status. Both men and women in the urban center of large metropolitan areas are more likely to be unemployed than workers living in the suburbs, smaller metro, or rural areas. However, persons, especially women, residing beyond the center city have higher risks of earning low-pay or working part-time. This supports my expectation that the expansion of lower skilled services resulted in greater employment opportunities outside the urban core, but these jobs are of poor quality. Furthermore, this pattern is also reinforced by research suggesting that large center cities are now the site of "command and control" centers- a central location of high-skilled and high-paying jobs for major corporations, and the rank and file jobs within the same companies are located in cheaper areas with lower labor costs.

The third major issue addressed in this dissertation deals with similarities and differences between men and women with respect to marginal work outcomes. Both sexes have experienced the growth in marginal employment, although in slightly different ways. Furthermore, net of controls, although the effect of period was different for men and women during the 1970s and 1980s, by the early 1990s men and women were comparable in the effects of period on poor work outcomes. In fact, the point estimates for earlier post-recessionary periods in the models for men (table 4.4) are higher than those for women. This suggests that temporal effects caught by these periods mattered somewhat less for women than for men during the 1970s and 1980s, and then by the final time point, both report similar temporal pressures. In other words, men and women have become more alike over the past two decades, with respect to the

influence of the economy on work outcomes. In addition, the effect of other demographic variables, notably race, marital status, and education, on marginal employment, also differed for men and women.

The similarities and differences between men and women are elaborated in Chapter 5. Findings from multilevel analysis show consistent patterns for race, experience, education, and industrial location for individuals. However, when labor market qualities are included in the second level of each model, I found that higher levels of occupational sex-segregation (a measure of inequality in terms of jobs) exacerbated the effect of being female with respect to three of four work outcomes and increased average MSA levels each type of marginal employment. In other words, women in these areas are worse off, in terms of marginal employment, than similar women in labor markets with low levels of occupational sex-segregation. Interestingly, area levels of sex-segregation do not impact men's outcomes. In combination with the findings from Chapter 4, this suggests despite the similarities between men and women in the early 1990s, when persons are located within the context of the labor market, other conditions disadvantage women and raise their chances of employment hardship.

This has implications for public policy regarding workplace integration. Despite investments in education and experience, when women face a closed opportunity structure, they are more likely to report employment hardship. This suggests that keeping opportunity structures open, or reducing levels of occupational sex-segregation, is an important part of increasing adequate employment. Affirmative action programs

are one means by which managers can ensure that their workplace is ensuring opportunities for qualified women.

To sum, the findings presented in this dissertation highlight four major points. First, marginal employment has become institutionalized by the early 1990s. Second, men and women differ with respect to their chances of being marginally employed and also in terms of demographic effects on work outcomes. In addition, demographic and geographic characteristics are important, in their own right, when considering employment hardship. Finally, area levels of occupation sex-segregation hurt women with regard to poor work outcomes, but do not affect men's employment.

The implications of these findings are important. If we believe that the economy should provide adequate employment for everyone, the persistence and rise in marginal employment during economic recoveries is problematic. This suggests that despite growth in GDP and declines in unemployment, a significant portion of the labor force remained trapped in low-quality, inadequate jobs. Therefore, businesses and investors may be turning large profits, but many people are struggling to get by. Evidence on this point comes from various sources. For example, a recent survey shows that of the families receiving aid at soup kitchens and pantries, 39% report at least one person working at a job (National Public Radio 1998). Another report notes the robustness characterizing the U.S. economy since the late 1980s, but also describes the lack of worker productivity as measured by workers incomes and an unequal distribution of rewards, with many workers not experiencing the current economic upswing (Uchitelle 1998).

The findings presented in this dissertation also have implications in light of current welfare reform. If persons on public assistance are less educated and less skilled than the rest of the labor force, the move from welfare to work may result in an increase in persons employed for low-pay or working part-year, or otherwise involuntary part-time, rather than lead to full-time, adequate, employment. Without the welfare safety net will no longer be available, marginally employed persons may be forced to seek supplementary income, food, or shelter, from other sources.

No one knows how long the economy will continue to grow with an increasing amount of people employed in marginal jobs The implicit outcome is a further bifurcation of employment outcomes (and other forms of inequality) that began in earnest in the early 1980s. Recent research suggests other practices offer viable alternatives to marginal, especially part-time, employment. For example, companies may invest in a permanent, contingent, labor pool trained to work in diverse jobs and rotated within the company wherever they are needed (Smith 1998). In this way, workers are not laid off or reduced to part time, and companies develop relationships and some degree of loyalty with flexible workers designed to meet the rapidly changing demands in the globalized economy. In addition, as the labor force is becoming more educated, attention could be directed toward the specific skills that corporations need for entry-level employees.

At some point since 1970, differences between women and men began to level out in at least one area: marginal employment. This may suggest that change since 1970, including the expansion of the service sector and concomitant demographic trends,

served to even the playing field for men and women, at least in terms of low-quality work. Unfortunately, the gains that women have made are reduced, or eroded, when labor market context is taken into account. This is discouraging, because it suggests that regardless of personal investments in education or skill, women are still subject to structural inequalities that cannot be addressed with an advanced degree, extra computer training, or a long work history. Occupational sex-segregation is a characteristic of labor markets that is slow to change, and most obviously addressed through active recruiting of women employees and adoption of affirmative action programs.

My dissertation shows how marginal employment became institutionalized during periods of economic recovery, but it does not examine hardship during economic boom times. Currently, the United States is experiencing a robust economy, exemplified by low unemployment, low interest rates, and a seemingly insurmountable stock market. However, even with very low rates of unemployment, reports continue to document persons with feeble ties to the labor force. I suspect a structural change in the labor market, what I have called the institutionalization of marginal employment, maintains a sector of workers trapped in low-quality jobs. Future research needs to examine employment hardship during peak economic times.

Another line of questioning should extend the gender comparisons begun in this dissertation, where findings show similarities in terms of marginal employment and individual level outcomes but a detrimental effect of contextual factors for women. Race was controlled in these analyses, but future research should untangle race and gender and look specifically at black men and women. Prior studies show that black women

have a long history of labor force participation and post increases in outcomes such as income, and that a substantial group of black men are weakly tied to the work force (Bernhardt, Morris, and Handcock 1995). Future research needs to compare black and white men and women with respect to poor work outcomes. Women and men show similar patterns for marginal employment, but extant research documents racial differences in outcomes such as crime, and this idea can be extended to compared black men and women's employment hardship with each other and also with their white counterparts.

Finally, given the rise in contingent work, and the often negative connotation associated with it, future research should assess whether and how these jobs increase employment hardship. Although many researchers suggest that contingent work is inadequate and exploitive, some companies can employ permanent, contingent, workers, with success. Work in this area needs to move beyond the premise that contingent work is inadequate, and examine objectively whether and how this form of work affects employment hardship.

References

Appelbaum, Eileen and Peter Albin. 1990. "Shifts in Employment, Occupational Structure, and Educational Attainment." Pp.31-66 in T. Noyelle (ed) Skills, Wages, and Productivity in the Service Sector Boulder: Westview.

Bernhardt, Annette, Martina Morris, and Mark S. Handcock. 1995. "Women's Gains or Men's Losses? A Closer Look at the Shrinking Gender Gap in Earnings." American Journal of Sociology 101(2):302-28.

Bianchi, Suzanne. 1995. "Changing Economic Roles of Women and Men." Pp. 107-154 in R. Farley (ed) State of the Union vol.1. New York: Russell Sage Foundation.

Blau, Peter M. and Otis Dudley Duncan. 1967. The American Occupational Structure. New York: John Wiley.

Bluestone, Stevenson, and Tilly. 1991. "The Deterioration in the Labor Market and Prospects for Young Men with Limited Schooling: Assessing the Impact of 'Demand Side Factors'." paper presented at the Eastern Economic Association Meetings, Pittsburgh, PA, March 14-15.

Bound and Holtzer. 1991. "Industrial Shifts, Skill Levels, and the Labor Market for White and Black Males," mimeo, University of Michigan and Michigan State University, February.

Bradbury, Katharine L. 1986. "The Shrinking Middle Class." New England Economic Review, September/October.

Braverman. 1975. Labor and Monopoly Captial: The Degradation of Work in the Twentieth Century New York: Monthly Press Review.

Bryk, Anthony S. and Stephan W. Raudensbush. 1992. Hierachical Linear Models Newbury Park: Sage Publications.

Burnstein, Paul. 1994. Equal Employment Opportunity: Labor Market Discrimination and Public Policy. New York: Aldine De Gruyter.

Burris, Val. 1983. "The Social and Political Consequences of Overeducation." American Sociological Review 48:454-467.

Clogg, Clifford C. 1979. Measuring Underemployment: Demographic Indicators for the United States New York: Academic Press.

Clogg, Clifford C. and Teresa A. Sullivan. 1983. "Labor Force Composition and Underemployment Trends, 1969-1980" Social Indicators Research 12:117-152.

Clogg, Clifford C., Teresa A, Sullivan and Jan E. Mutchler. 1986. "Measuring Underemployment and Inequality in the Work Force." Social Indicators Research 18:375-393.

Clogg, Clifford C. and James W. Shockey. 1985. "The Effect of Changing Demographic Compostion on Recent Trends in Underemployment." Demography 22(3):395-414.

Cohany, Sharon R. Anne E. Polivka, and Jennifer M. Rothgeb. 1994. "Revisions: Current Population Survey." in U.S. Dept of Commerce, Bureau of the Census Current Population Survey:Annual Demogrpahic File, 1994. Washington D.C.: U.S.Dept of Commerce, Bureau of the Census 1994. Ann Arbor, MI: Interuniversity Consortium for Political and Social Research, 1995.

Colclough, Glenda and Charles M. Tolbert. 1992. Work in the Fast Lane: Flexibility, Divisions of Labor, and Inequality in High-Tech Industries Albany: State University of New York Press.

Danziger, Sheldon and Peter Gottschalk. 1993. Uneven Tides: Rising Inequality in America. New York: Russell Sage Foundation.

Farley, Reynolds. 1996. The New American Reality: Who We Are, How We Got Here, Where Are We Going. New York: Russell Sage Foundation.

Farley, Reynolds (ed) 1995. State of the Union vol 1 and 2. New York: Russell Sage Foundation.

Findeis, Jill L. 1995. "Gender Differences in Human Captial in Rural America." Pp. 183-211 in L.Buealieu and D. Mulkey (eds) Investing in People: The Human Captial Needs of Rural America Boulder: Westview.

Frisbie, W. Parker and Lisa Neidert. 1977. "Inequality and the Relative Size of Minority Populations: A Comparative Analysis." American Sociological Review. 32: 1007-1930.

Glenn, Evelyn and Charles M. Tolbert. 1987. "Technology and Emerging Patterns of Stratification for Women of Color: Race and Gender Segregation in Computer Occupations." Pp.318-331 in B.Wright (ed) Women, Work, and Technology Ann Arbor: University of Michigan Press.

Goldin, Claudia. 1990. Understanding the Gender Gap: An Economic History of American Women. New York: Oxford University Press.

Harrison, Bennet and Barry Bluestone. 1988. The Great U-Turn: Corporate Restructing and the Polarizing of America New York: Basic Books, Inc., Publishers.

Hauser, P.M. 1974. "The Measurement of Labour Utilization." Malayan Economic Review 19:1-17.

Hawely, Amos H. 1986. Human Ecology: A Theoretical Essay Chicago: University of Chicago Press.

Hirschman, Charles. 1988. "Minorities in the Labor Market: Cyclical Patterns and Secular Trends in Joblessness." Pp. 63-85 in G. Sandefur and M. Tienda (ed) Divided Opportunities: Minorities, Poverty, and Social Policy New York: Plenum Press.

Hogan, Dennis P. and Daniel T. Lichter. 1995. "Children and Youth: Living Arrangements amd Welfare." Pp.93-140 in R. Farley (ed) State of the Union vol.2. New York: Russell Sage Foundation.

Jensen, Leif, Jill L. Findeis, and Wan-Ling Hsu. 1996. "Dynamics of Underemployment in the United States." Paper presented at the Population Association of America Annual Meeting:New Orleans, LA.

Karoly, Lynn A. 1993. "The Trend in Inequality Among Families, Individuals, and Workers in the United States." Pp. 19-97 in Danzigger and Gottschalk (eds) Uneven Tides: Rising Inequality in America. New York: Russell Sage Foundation.

Kasarda, John D. 1989. "Urban Industrial Transition and the Underclass." The Annals of the American Academy of Political and Social Science 501:26-47.

Kasarda, John D. 1995. "Industrial Restructuring and the Changing Location of Jobs." Pp. 215-268 in R. Farley (ed) State of the Union vol.1. New York: Russell Sage Foundation.

Kasarda, John D. 1990. "Structural Factors Affecting the Location and Timing of the Urban Underclass Growth." Urban Geography 11:234-64.

Kaufman, Robert L. 1982. "The structure of occupational labor markets." Unpublished manuscript.

Killian, Molly Sizer and Charles M. Tolbert. 1993. "Mapping Social and Economic Space: The Delination of Local Labor Markets in the United States." Pp. 69-79 in

Singelmann and Deseran (eds) Inequalities in Labor Market Areas. Boulder: Westview.

Levitan, Sar A. and Issac Shapiro. 1987. Working But Poor: America's Contradiction Baltimore: Johns Hopkins University Press.

Levy, Frank. 1995. "Incomes and Income Inequality." Pp 1-58 in R. Farley (ed.) State of the Union vol.1. New York: Russell Sage Foundation.

Levy, Frank. 1988. Dollars and Dreams. New York: W.W. Norton and Company.

Lichter, Daniel T. 1988. "Racial Differences in Unemployment in American Cities." American Journal of Sociology 93:771-92.

Lichter, Daniel T. and Janice A. Costanzo. 1987. "Nonmetropolitan Underemployment and Labor Force Compostition." Rural Sociology 52(3):329-344.

Lichter, Daniel T., D Landry and Clifford C. Clogg. 1991. "Measuring Short Term Mobility with the Labor Utilization Framework." Social Science Research 20:329-354.

Loveman, Gary W. and Chris Tilly. 1988. "Good Jobs or Bad Jobs: What Does the Evidence Say?" New England Economic Review. January/February.

Mare, Robert D. 1995. "Changes in Educational Attainment and School Enrollment." Pp. 155-214 in R. Farley (ed) State of the Union vol.1. New York: Russell Sage Foundation.

Mare, Robert D. and Christopher Winship. CURRENT POPULATION SURVEYS: UNIFORM MARCH FILES, 1964-1988 [Computer file]. Madison Wisconsin, Center for Demography and Ecology [producer], 1989. Ann Arbor: Inter-university Consortium for Political and Social Research [distributor], 1990.

McCleary, Richard and Richard A. Hay, Jr. 1980. Applied Time Series Analysis for the Social Sciences Beverly Hills : Sage Publications.

McLanahan, Sara and Lynne Casper. 1995. "Growing Diversity in the American Family." Pp. 1-46 in R. Farley (ed) State of the Union vol.1. New York: Russell Sage Foundation.

Morris, Martina, Annette D. Bernhardt and Mark S. Handcock. 1994. "Economic Inequality: New Methods for New Trends." American Sociological Review 59(2):205-219.

Murphy, Kevin M. and Finis Welch. 1993. "Industrial Change and the Rising Importance of Skill." Pp.101-132 in S. Danzigger and P. Gottschalk (eds) Uneven Tides: Rising Inequality in America New York: Russell Sage Foundation.

Mutchler, Jan Eloise. 1985. Underemployment and Gender: Demographic and Structural Indicators. Ph.D. Dissertation, Austin: University of Texas.

National Public Radio. 1998. "Report from Second Harvest." February.

Nelson, Joel I. and Jon Lorence. 1985. "Employment in Service Activities and Inequality in Metropolitan Areas." Urban Affairs Quarterly 21(1):106-125.

Nord, Stephan, John J. Phelps, and Robert G.Sheets. 1988. "An Analysis of the Economic Impact of the Service Sector on Underemployment in Major Metropolitan Areas in the United States." Urban Studies 25:418-432.

Noyelle, Thierry J. 1990 Beyond Industrial Dualism. Boulder: Westview.

Reich, Robert M. 1997. Locked in the Cabinet. New York: Alfred A. Knopf.

Reskin, Barbara F. and Patricia A. Roos. 1990. Job Queues, Gender Queues: Explaining Women's Inroads in Male Occupations. Temple University Press.

Roundtree, Pamela W. and Kenneth C. Land. 1996. "Perceived Risk versus Fear of Crime: Empirical Evidence of Conceptually Distinct Reactions in Survey Data." Social Forces 74(4):1353-1376.

Singelmann, Joachaim. 1975. From Agriculture to Services: The Transformation of Industrial Employment Sage Library of Research, vol 69. Beverly Hills: Sage Publications.

Singelmann, Joachaim and F. Andrew Deseran. 1993. Inequalities in Labor Market Areas. Boulder: Westview.

Singelmann, Joachaim, Forrest A. Deseran, F. Carson Mencken and Jiang Hong Li. 1993. "What Drives Labor Market Growth? Economic Performance of Labor Market Areas, 1980-1986." Pp. 125-142 in Singelmann and Deseran (eds) Inequalities in Labor Market Areas Boulder: Westview.

Smith, Shelly A. and Marta Tienda. 1987. "The Doubly Disadvantaged: Women of Color in the U.S. Labor Force." Pp.61-80 in A. Stromberg and S. Harkess (eds) Working Women Mayfield.

Sullivan, Teresa A. 1978. Marginal Workers, Marginal Jobs. Austin: University of Texas Press.

Thurow, Lester. 1996. Introduction to T.Schafer and J. Faux (eds) Reclaiming Prosperity: A blueprint for progressive economic reform. Armouk: M.E. Sharpe, Inc.

Tienda, Marta. 1989. "Puerto Ricans and the Underclass Debate." Annals of the American Academy of Political and Social Science. 501:105-119.

Tienda, Marta, Katharine M. Donato and Hector Cordero-Guzman. 1992. "Schooling, Color, and the Labor Force Activity of Women." Social Forces 71(2): 365-395.

Tienda, Marta and Ding-Tzann Lii. 1987. "Minority Concentration and Earnings Inequality: Blacks, Hispanics, and Asians Compared." American Journal of Sociology 93:141-165.

Tigges, Leann M. and Deborah M. Tootle. 1990. "Labor Supply, Labor Demand, and Men's Underemployment in Rural and Urban Labor Markets." Rural Sociology 55(3):328-356.

Tolbert, Charles M. and John J. Beggs. 1996 "Socioeconomic Status in Local Labor Markets: Do SES Scores Matter in Community Context" Paper prepated for Southern Sociological Society Annual Meeting: Richmond, VA.

Wetzel, James R. 1995. "Labor Force, Unemployment, and Earnings." Pp.59-106 in R.Farley (ed) State of the Union vol.1. New York: Russell Sage Foundation.

Wilson, William Julius. 1993. The Ghetto Underclass. Newbury Park: SAGE Publications.

Wilson, William Julius. 1991. "Public Policy Research and The Truly Disadvantaged" Pp. 460-81 in C.Jencks and P.Peterson (ed) The Urban Underclass. Washington, D.C. : Brookings Institution.

Wilson, William Julius. 1987. The Truly Disadvantaged: The Inner City, The Underclass, and Public Policy. Chicago: University of Chicago Press.

Uchitelle, Louis. 1998. "America's Treadmill Economy." New York Times (3/8/98).

United States Bureau of the Census, Current Population Reports, Series P20-476, "Educational Attainment in the United States: March 1993 and 1992," table 18. http://www.census.gov/ftp/pub/population/www/educ-hist.html (12/7/95).

United States Bureau of the Census. 1991. "Marital Status and Living Arrangements" March 1991 report, p 2.

United States Bureau of Labor Statistics. 1995. "Labor force statistics from the Current Populations Survey." Bureau of Labor Statistics Data. http://www.bls.gov/cgi-bin/surveymost?lf (12/7/95, 1/10/98).

United States Department of Commerce. Bureau of the Census. CURRENT POPULATION SURVEY: ANNUAL DEMOGRAPHIC FILE, 1992 [Computer file]. Washington, DC: U.S. Dept of Commerce, Bureau of the Census [producer], 1992. Ann Arbor, MI: Inter-univeristy Consortium for Political and Social Research [distributor] 1993.

United States Department of Commerce. Bureau of the Census. CURRENT POPULATION SURVEY: ANNUAL DEMOGRAPHIC FILE, 1993 [Computer file]. Washington, DC: U.S. Dept of Commerce, Bureau of the Census [producer], 1993. Ann Arbor, MI: Inter-univeristy Consortium for Political and Social Research [distributor] 1994.

United States Department of Commerce. Bureau of the Census. CURRENT POPULATION SURVEY: ANNUAL DEMOGRAPHIC FILE, 1994 [Computer file]. Washington DC: U.S. Dept of Commerce, Bureau of the Census [producer], 1994. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor] 1995.

Appendix

MSAs included in Contextual Analyses, 1991-93

Albany-Schenectady-Troy, NY MSA
Albuquerque, NM MSA
Allentown-Bethlehem-Easton, PA MSA
Greenville-Spartanburg-Anderson, SC MSA
Asheville, NC MSA
Atlanta, GA MSA
Austin-San Marcos, TX MSA
Bakersfield, CA MSA
Baltimore, MD MSA
Baton Rouge, LA MSA
Kalamazoo-Battle Creek, MI MSA
Beaumont-Port Arthur, TX MSA
Birmingham, AL MSA
Boise City, ID MSA
Sarasota-Bradenton, FL MSA
Brownsville-Harlingen-San Benito, TX MSA
Canton-Massillon, OH MSA
Cedar Rapids, IA MSA
Charleston-North Charleston, SC MSA
Charlotte-Gastonia-Rock Hill, NC-SC MSA
Chattanooga, TN-GA MSA
Colorado Springs, CO MSA
Columbia, MO MSA
Columbia, SC MSA
Columbus, GA-AL MSA
Columbus, OH MSA
Corpus Christi, TX MSA
Davenport-Moline-Rock Island, IA-IL MSA
Dayton-Springfield, OH MSA
Daytona Beach, FL MSA
Des Moines, IA MSA
El Paso, TX MSA
Erie, PA MSA
Evansville, IN-KY MSA
Fayetteville, NC MSA
Flint, MI MSA
Florence, AL MSA
Florence, SC MSA
Fort Myers-Cape Coral, FL MSA

Fort Smith, AR-OK MSA
Fresno, CA MSA
Gainesville, FL MSA
Grand Rapids-Muskegon-Holland, MI MSA
Greensboro--Winston-Salem--High Point, NC MSA
Greenville, NC MSA
Harrisburg-Lebanon-Carlisle, PA MSA
Hickory-Morganton, NC MSA
Honolulu, HI MSA
Huntsville, AL MSA
Indianapolis, IN MSA
Jackson, MS MSA
Johnson City-Kingsport-Bristol, TN-VA MSA
Joplin, MO MSA
Kalamazoo-Battle Creek, MI MSA
Kansas City, MO-KS MSA
Knoxville, TN MSA
Lakeland-Winter Haven, FL MSA
Lancaster, PA MSA
Lansing-East Lansing, MI MSA
Las Vegas, NV-AZ MSA
Lima, OH MSA
Lincoln, NE MSA
Little Rock-North Little Rock, AR MSA
Louisville, KY-IN MSA
Lubbock, TX MSA
Macon, GA MSA
McAllen-Edinburg-Mission, TX MSA
Melbourne-Titusville-Palm Bay, FL MSA
Memphis, TN-AR-MS MSA
Minneapolis-St. Paul, MN-WI MSA
Mobile, AL MSA
Montgomery, AL MSA
Nashville, TN MSA
New Orleans, LA MSA
Norfolk-Virginia Beach-Newport News, VA-NC MSA
Ocala, FL MSA
Oklahoma City, OK MSA
Omaha, NE-IA MSA
Orlando, FL MSA
Peoria-Pekin, IL MSA
Phoenix-Mesa, AZ MSA
Poughkeepsie, NY MSA

Raleigh-Durham-Chapel Hill, NC MSA
Reno, NV MSA
Richmond-Petersburg, VA MSA
Roanoke, VA MSA
Rochester, NY MSA
Rockford, IL MSA
Sacramento, CA PMSA
Saginaw-Bay City-Midland, MI MSA
Salt Lake City-Ogden, UT MSA
San Antonio, TX MSA
San Diego, CA MSA
Shreveport-Bossier City, LA MSA
Springfield, MO MSA
Syracuse, NY MSA
Tallahassee, FL MSA
Tampa-St. Petersburg-Clearwater, FL MSA
Toledo, OH MSA
Tucson, AZ MSA
Tuscaloosa, AL MSA
Waco, TX MSA
Waterloo-Cedar Falls, IA MSA
West Palm Beach-Boca Raton, FL MSA
Wichita, KS MSA
York, PA MSA
Youngstown-Warren, OH MSA

Vita

Nicole T. Flynn was born on April 28, 1969, in Waynesboro, Virginia. She graduated from Stuarts Draft High School in Stuarts Draft, Virginia, in 1987. She then entered the College of William and Mary, in Williamsburg, Virginia, and received a Bachelor of Arts in Government and Philosophy in May 1991. In December of 1993, she received a Master of Arts degree in Sociology from the College of William and Mary. Presently, she is a candidate for the degree of Doctor of Philosophy in the Department of Sociology at Louisiana State University.

DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Nicole Thomson Flynn

Major Field: Sociology

Title of Dissertation: Marginal Employment in the United States: 1971-1993

Approved:

Major Professor and Chairman

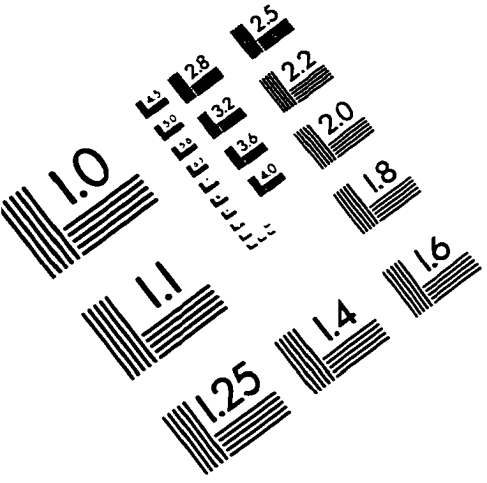
Dean of the Graduate School

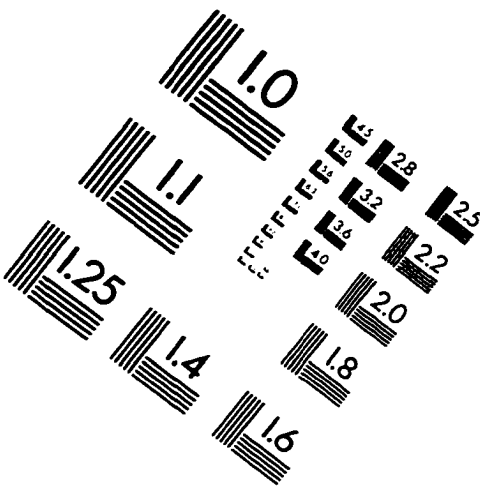
EXAMINING COMMITTEE:

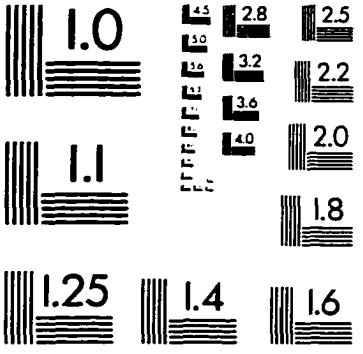
Date of Examination:

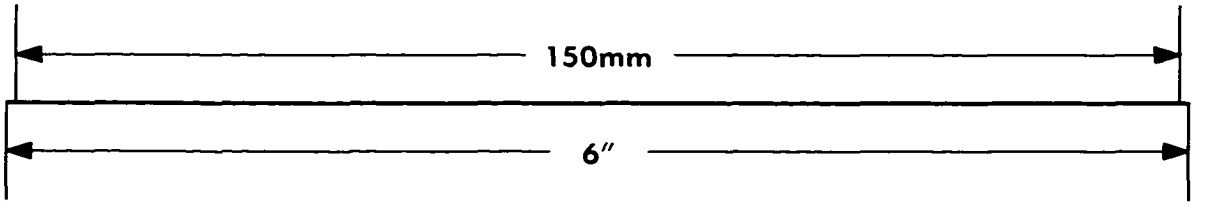
March 30, 1998

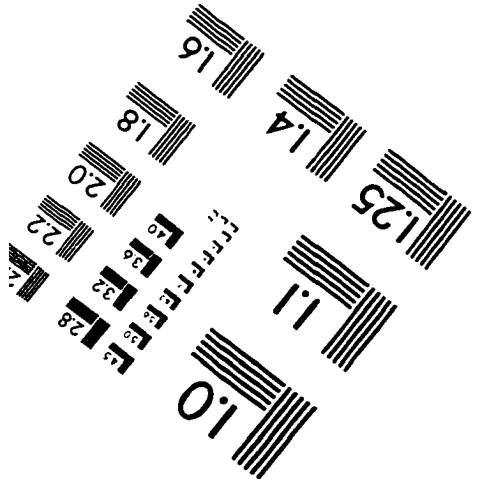
IMAGE EVALUATION TEST TARGET (QA-3)











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